



Website Payments Standard Integration Guide

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PayPal Website Payments Standard Integration Guide

Document Number: 100000.en_US-200704

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Preface

Intended Audience

This document is for merchants whose websites obtain payments using PayPal features.

Documentation Problems

If you discover any errors in or have any problems with this documentation, please e-mail us by following the instructions below. Describe the error or problem as completely as possible and give us the document title, the date of the document (located at the foot of every page), and the page number or page range.

To contact Developer Technical Support about documentation problems:

1. Log in to your account at <https://developer.paypal.com/> by entering your email address and password in the **Member Log In** box
2. Click **Help Center** at the bottom of the box on the right side of the page.
3. Click **Email PayPal Technical Support**.
4. Complete the form.

Get Started Quickly: Integration Center

PayPal's Integration Center at <https://www.paypal.com/integration> has step-by-step details for getting started with the PayPal Software Development Kits (SDKs), Website Payments Pro, Express Checkout, Website Payments Standard, Authorization & Capture, Instant Payment Notification, and more.

Visit the Integration Center at: <https://www.paypal.com/integration>

Revision History

Revision history for *PayPal Website Payments Standard Integration Guide*.

TABLE P.1 Revision History

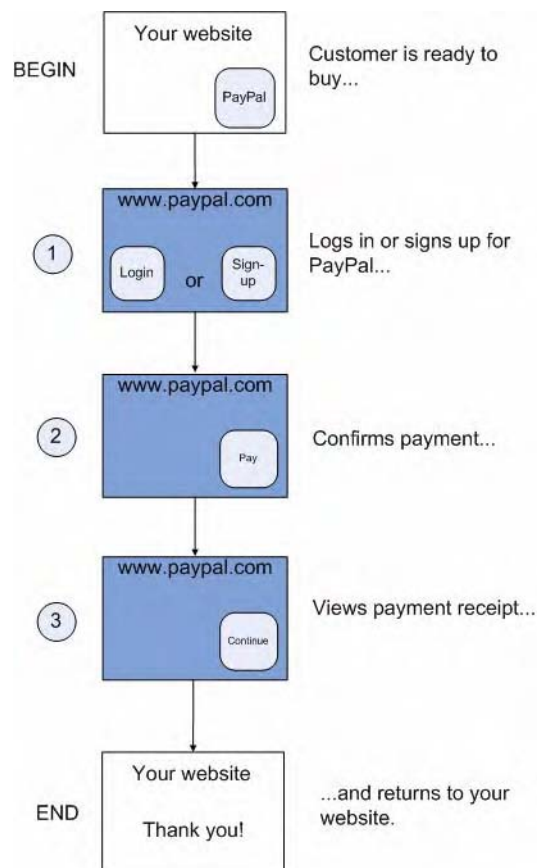
Date	Description
April 2007	Updated screenshots and corresponding instructions. Added Appendix B, “Billing and Shipping Address Settings.”
October 2006	Minor clarifications
August 2006	New PayPal shopping cart variable: <code>shopping_url</code> The value of <code>_ext-enter</code> of the <code>cmd</code> variable for FORM prepoulation is now no longer necessary. Clarification of values for the <code>rm</code> variable: 0, 1, or 2, not the strings “GET” or “POST”.
July 2006	New chapter on using Authorization & Capture with Website Payments Standard, including capturing multiple authorizations in batch on https://www.paypal.com/ . Miscellaneous updates.
March 2006	Miscellaneous minor corrections. Expanded description of creating Encrypted Website Payments buttons

1

How Website Payments Standard Works

The *PayPal Website Payments Standard Integration Guide* describes how you use Website Payments Standard. Website Payments Standard consists of HTML FORMs on your website that direct your customer's web browser to the PayPal website at <http://www.paypal.com> in order to pay you and then return the customer to your website. Figure 1.1, "Basic Website Payments Standard Page Sequence," shows the basic sequence of web browser pages when a customer pays you with PayPal Website Payments Standard.

FIGURE 1.1 Basic Website Payments Standard Page Sequence



All features of Website Payments Standard are variations on this basic page sequence. You use HTML FORM variables and the settings in your PayPal account **Profile** to affect the behavior of the basic sequence.

Example of the Basic Page Sequence

Here's an example of the basic page sequence of Website Payments Standard. Like all examples of pages in this guide, this example is based on the PayPal sample integration, which demonstrates how PayPal has been integrated with the fictitious online store called "DesignerFotos."

BEGIN. Steve chooses to pay with PayPal on your website.

FIGURE 1.2 Beginning of Basic Page Sequence on Your Website



This example illustrates the Shopping Cart option, discussed in [Chapter 4, "Multiple-Item Payment: Shopping Cart."](#)

Step 1: Steve logs in to PayPal.

FIGURE 1.3 Log In to PayPal Account

The screenshot shows the PayPal integration on the DesignerFotos website. At the top, the site logo "DesignerFotos" is displayed with a note "[PayPal's sample integration]". Below the logo, a summary bar indicates "2 Items, Subtotal with shipping: \$505.00". The main heading is "Pay Fast with PayPal", accompanied by the PayPal logo and a "Secure Payments" badge. A descriptive text states: "PayPal securely processes payments for Buy.com. Pay with PayPal in a couple of clicks." Below this, a section titled "Why use PayPal?" lists three benefits: it's free to send money and shop online; you can shop without sharing financial information; and over 50,000 online merchants accept PayPal. A link "Don't have a PayPal account?" points to a "continue checkout" link. On the right, a "LOG IN TO PAYPAL" box contains input fields for "Email:" and "Password:", a "Log In" button, and a link for "Forgot email address or password?".

Steve logs in to his PayPal account and clicks Log In. If he does not have a PayPal account, he can still complete the payment by clicking on the Continue Checkout link.

If Steve is using the DesignerFotos web site for the first time or has disabled cookies, he may see the following page:

FIGURE 1.4 Create a New PayPal Account or Log in to PayPal Account

The screenshot shows the DesignerFotos website with a PayPal integration. At the top, the site logo and a note "[PayPal's sample integration]" are visible. Below the logo, a shopping cart summary shows "2 Items, Subtotal with shipping: \$505.00". A blue arrow points to a link that says "Click to hide (as shown) or display shopping cart details." The main section is titled "Create a PayPal Account or Log In". It contains several input fields: Country (United States), First Name, Last Name, Credit Card Number (40), Expiration Date (mm / yy), Billing Address Line 1, Billing Address Line 2 (optional), City, State, Zip, Home Telephone, Email, Create PayPal Password (8 characters minimum), and Confirm Password. There are also icons for Visa, MasterCard, Discover, and AMEX. To the right, there is a "Log In" section for existing users, with fields for Email and Password, a "Log In" button, and links for "Forgot email address" and "Forgot password?". The page also features a "PayPal Secure Payments" logo and a link to "Terms of Services".

Here, Steve can create a new account or log in to their existing PayPal account.

Step 2: On the PayPal website, Steve reviews the details of the payment and makes the payment by clicking Pay \$505.00 Now!

FIGURE 1.5 Customer Reviews Payment

Payments by **PayPal**

Billing and Shipping **Review** Done

Review Your Payment

* indicates required fields

[Secure Transaction](#)

Item	Options	Quantity	Amount
Orchid (32" x 32")		1	\$250.00 USD
Pomeranian Puppy (32" x 32")		1	\$250.00 USD

Subtotal: \$500.00 USD

Shipping & Handling: \$5.00 USD

Total Amount: \$505.00 USD

Pay \$505.00 Now!

Payment Method: Mastercard [XXXX-5555] \$505.00 USD
[Change](#)

Shipping Address: 1 Infinite Loop
Suite #125
Cupertino, CA, 95014
[Change](#)

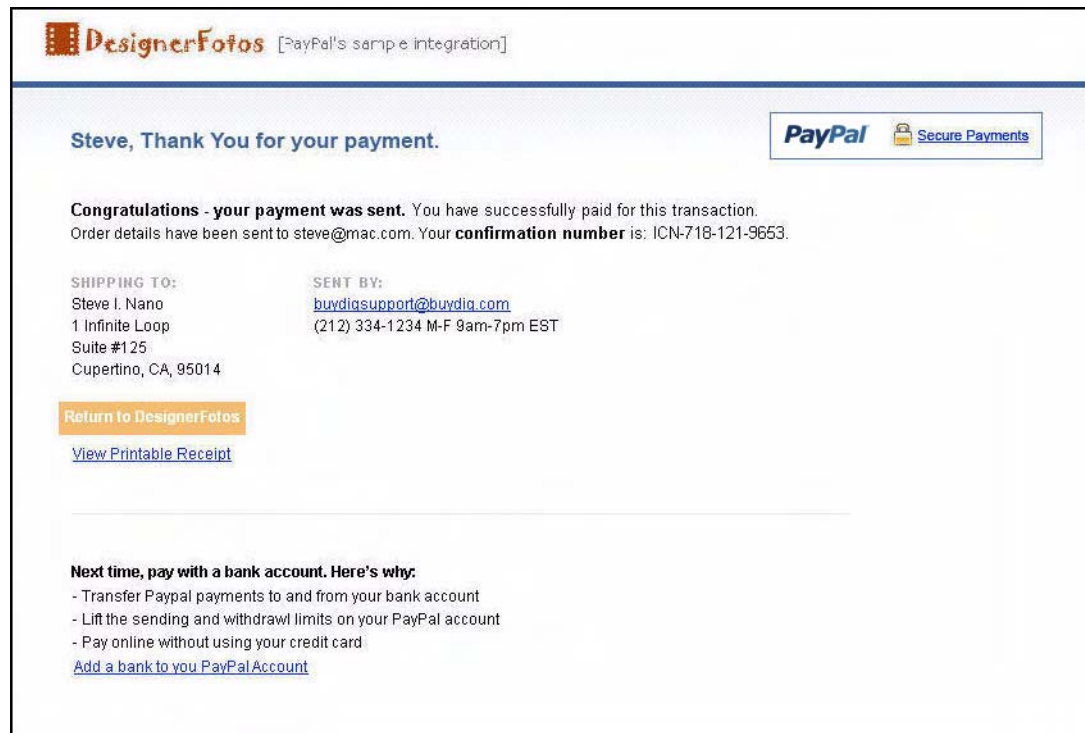
Contact Information: steve@mac.com
(408) 967-7400
[Change](#)

Pay \$505.00 Now!

At this point, Steve can choose among funding sources (credit cards, debit cards, or bank accounts recorded in the PayPal accounts) with which to pay you and can also choose among shipping addresses stored on PayPal.

Step 3: Steve sees a payment confirmation page on PayPal and clicks **Return to DesignerFotos**.

FIGURE 1.6 Payment Confirmation or “You Made a Payment” Page on PayPal



END. Steve is returned to your website.

FIGURE 1.7 Customer Returns to Your Website



How You Get Your Money

After a customer makes a payment, your PayPal account lists the payment in your Account History, as shown below.

FIGURE 1.8 Account History: Recent Activity



Notifications You Receive

You can be notified of payments in four ways: email, History Log, Downloadable History Log, and Instant Payment Notification (IPN).

Email

You receive email notification in the following cases:

- Successful payment
- Pending payment
- Canceled payment

If you do not want to receive email notification:

1. Click the **Profile** subtab of the **My Account** tab.
2. Click the **Notifications** link in the Account Information column.
3. Under the **Payment Notifications** heading, clear the **I receive PayPal Website Payments and Instant Purchase** checkbox.

4. Click **Save**.

Transaction History

Your transaction history (also called your “History”) displays information about your payments. The status of each payment is one of the following statuses:

- **Completed:** The transaction was successful and the money was credited to your account
- **Cleared:** The payment cleared the sender’s account and was credited to your account
- **Uncleared:** The payment has not cleared the sender’s account yet

Downloadable History Log

You can download copies of your transaction history to your computer. You can specify a date range for the transactions and the format of the downloadable file. The file contains a record of your transactions.

To learn more about Downloadable History Logs, see the *Order Management Integration Guide*.

Instant Payment Notification (IPN)

Instant Payment Notification is a mechanism by which you to receive transaction data. IPN posts individual transaction information to a URL on your website that you have programmed to process this incoming data. To use IPN, you must activate it, because it is disabled by default.

If IPN is activated, you receive a notification in the following cases:

- When a payment is first sent, indicating that the status of the payment is Completed or Pending
- When a payment clears, fails, or is denied, if the status was pending

To learn more about IPN, see [“Instant Payment Notification: notify_url” on page 108](#) and the *Order Management Integration Guide*.

Website Payments Standard has two primary components: Buy Now or Donations buttons and Shopping Cart. Both are constructed with the same basic set of HTML FORM variables. You can affect their behavior and appearance with settings in your account **Profile** and with additional FORM variables.

The following table summarizes the contents of this guide.

TABLE 1.1 How To Use This Guide

Feature	Description	See Also...
Buy Now or Donations	Paying for single items from your website.	Chapter 3, “Single-Item Payment: Buy Now and Donations”
Shopping Cart	Paying for multiple items from your website. It comes in two forms: a shopping cart hosted on PayPal’s website and as HTML FORM variables for use in third-party shopping carts.	Chapter 4, “Multiple-Item Payment: Shopping Cart”
Authorization & Capture	Authorizing a payment and capturing later on the PayPal website	Chapter 5, “Using Authorization & Capture with Website Payments Standard
Custom Payment Pages	Account Profile settings that brand PayPal’s pages with your own colors and images.	“Branding PayPal’s Payment Pages” on page 25
“Account Optional” or Website Payments Express	Account Profile setting that allows a customer to pay you with credit or debit cards without having a PayPal account.	“Account Optional or Website Payments Express” on page 30
Auto Return	Account Profile settings that eliminate PayPal’s payment receipt page (step 4 in Figure 1.1, “Basic Website Payments Standard Page Sequence).	“Auto Return” on page 37
Automatic Calculation of Shipping, Handling, and Tax	Account Profile settings that calculate shipping and handling costs and sales tax for you.	“Automatic Calculation of Shipping and Handling Cost and Tax” on page 39
Customer Contact Telephone	Account Profile setting that sends you the customer’s contact telephone number.	“Getting Customer Contact Telephone Numbers” on page 44
Multi-User Access	Account Profile setting that allows up to seven email addresses to share your Business account.	“Multi-User Access to Your PayPal Account” on page 50
Encrypted Website Payments	Encrypt payment information before it is sent to PayPal to protect customer data.	Chapter 7, “Encrypted Website Payments”

Other Standard Products and Features

Website Payments Standard also includes other products and features not detailed in this guide:

- Instant Payment Notification (IPN) and Payment Data Transfer (PDT) are HTML FORM-based mechanisms to send information about payments to programs on your website. IPN and PDT are described in the [Order Management Integration Guide](#).
- Subscriptions and Recurring Payments, which are described in the [Subscriptions and Recurring Payments Guide](#)

Website Payments Pro

Website Payments Pro consists of PayPal Express Checkout and the Direct Payment Application Programming Interfaces (APIs). Rather than being based solely on HTML FORM variables (as is Website Payments Standard), these products rely on the PayPal Web Services API. For more information, see the [Website Payments Pro Integration Guide](#).

Get Started Quickly: Integration Center

PayPal's Integration Center at <https://www.paypal.com/integration> has step-by-step details for getting started with the PayPal Software Development Kits (SDKs), Website Payments Pro, Express Checkout, Website Payments Standard, Authorization & Capture, Instant Payment Notification, and more.

Visit the Integration Center at: <https://www.paypal.com/integration>

Related Online Information

Consult the following URLs for information about PayPal's fees, online security, user agreement and related policies, online help, and customer service.

TABLE 1.2 Hyperlinks for Fees, Security, User Agreement, Policies, Online Help, and Customer Service

Information	URL
Fees	https://www.paypal.com/fees
Online Security	https://www.paypal.com/security
User Agreement and Policies	https://www.paypal.com/cgi-bin/webscr?cmd=p/gen/ua/ua-outside
Online Help	https://www.paypal.com/help
Customer Service	https://www.paypal.com/wf

2

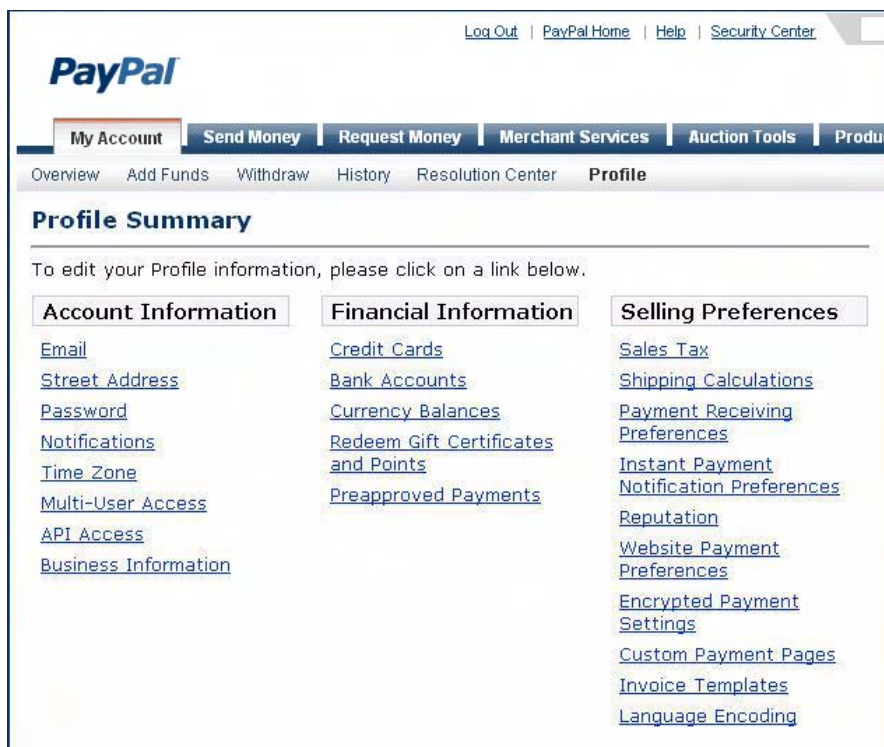
Using Your Merchant Account Profile and Tools

This chapter details how you can use your account **Profile** settings and other tools on the PayPal website to affect how payments are processed.

The Account Profile Summary

Use your PayPal account **Profile** to manage information about your PayPal account. To see your Profile, log in to your PayPal account, and click the **Profile** subtab of the **My Account** tab. The **Profile** has three sections: Account Information, Financial Information, and Selling Preferences.

FIGURE 2.1 Account Profile Summary Page



Account Information

Use the **Account Information** column for basic account maintenance, including updating your password, adding and confirming email addresses, managing your business information, and (for Premier accounts) configuring multi-user access to your PayPal account.

Financial Information

Use the **Financial Information** column to organize and maintain the financial instruments associated with your PayPal account: manage your credit cards and bank accounts, activate and manage your PayPal Debit Card, maintain multiple currency balances, and view your monthly account statements.

Selling Preferences

Use the **Selling Preferences** column to organize the way you sell with your PayPal account, including:

- Branding PayPal's payment pages
- Streamlining purchases with Website Payment Preferences:
 - Account Optional
 - Auto Return
 - Automatic calculation of shipping, handling, and sales tax
- Payment receiving preferences for blocking certain kinds of payments
- Getting customers' contact telephone numbers
- Language encoding your data

The majority of this chapter focuses on using **Selling Preferences**.

Correspondence Between Profile Settings and HTML Variables

Many **Profile** settings have equivalent HTML **FORM** variables that can control the behavior of individual transactions. After you enable a setting in your Profile, you can include **FORM** variables with a transaction to take advantage of that Profile setting. See the following sections for more information:

- [“Overriding Page Style Settings On Individual Transactions” on page 29](#)
- [“Overriding Tax Setting on Individual Transactions” on page 40](#)
- [“Overriding Shipping Calculation on Individual Transactions” on page 41](#)
- [“Setting the Character Set: charset” on page 105](#)
- [“Setting Return URL on Individual Transactions” on page 105](#)
- [“Desired Currency on Individual Transactions” on page 106](#)

Branding PayPal's Payment Pages

With our Custom Payment Pages feature, you can tailor PayPal's payment pages to the style of your website. Custom Payment Pages work with all PayPal Website Payment buttons and with the PayPal Account Optional feature.

You can add up to three custom page styles.

The pictures in this section demonstrate the types of customization you can add to your PayPal Website Payment buttons. [Figure 2.2, "Uncustomized Payment Page in Standard PayPal Page Style,"](#) shows a payment page with no customization.

FIGURE 2.2 *Uncustomized Payment Page in Standard PayPal Page Style*

Payment For	Quantity	Amount
Orchid (32" x 32")	1	\$250.00 USD
Subtotal:		\$250.00 USD
Total Amount:		\$250.00 USD

PayPal Checkout

If you already have a PayPal account, enter your login details below.

***Email Address:** [Forgot your email address?](#)

***PayPal Password:** [Forgot your password?](#)

Don't have a PayPal account? [Click here](#)

[Continue](#)

Figure 2.3, “Complete Custom Page Style,” shows all the customization you can make.

FIGURE 2.3 Complete Custom Page Style

Page header image

Page header background color

Payments by **PayPal**

DesignerFotos

Enter Payment Information

PayPal securely processes payments for your merchant, **Designer Fotos**. To continue, please enter the required information below. [Learn more](#) about PayPal.

* indicates required fields

[Secure Transaction](#)

Payment For	Quantity	Amount
Orchid (32" x 32")	1	\$25.00 USD
		Subtotal: \$25.00 USD
		Shipping & Handling: \$0.00 USD
		Total Amount: \$25.00 USD

PayPal Checkout

If you already have a PayPal account, enter your login details below.

***Email Address:** [Forgot your email address?](#)

***PayPal Password:** [Forgot your password?](#)

Don't have a PayPal account? [Click here](#)

PayPal

Page background color

[Continue](#)

Working with Custom Payment Pages

1. Log in to your PayPal account at <https://www.paypal.com>.
2. Click the **Profile** subtab.
3. In the **Selling Preferences** column, click **Custom Payment Pages**.

The customization page shown in Figure 2.4, “Edit Custom Page Style Page,” is displayed.

FIGURE 2.4 Edit Custom Page Style Page

Log Out | PayPal Home | Help | Security Center

PayPal

My Account | Send Money | Request Money | Merchant Services | Auction Tools | Products

Overview | Add Funds | Withdraw | History | Resolution Center | **Profile**

Edit Custom Page Style [Back to Profile Summary](#)

Customize PayPal's payment pages to match the style of your website. [Learn more.](#)

Page Style Name - Please choose a name containing up to 30 characters and no spaces.

Page Style Name:

Header Image URL - Please specify an image that is a maximum size of 750 pixels wide by 90 pixels high. Larger images will be cut to this size. The image you choose will appear at the top left of the payment page. We recommend providing an image only if it is stored on a [secure \(https\) server](#).

Header Image URL:

Header Background Color - Please enter the background color for the header using [HTML hex code](#).

Header Background Color:

Header Border Color - Please enter the border color for the header using [HTML hex code](#). The border will be a 2 pixel perimeter around the header space, which is 750 pixels wide by 90 pixels high.

Header Border Color:

Payment Flow Background Color - Please enter the background color for the payment pages using [HTML hex code](#). Certain colors are [not allowed](#).

Background Color:

From this page, you can add, edit, preview, and remove page styles, and make any defined page style the primary page style.

Adding or Editing a Page Style

The settings described here can also be specified with HTML FORM input variables set for individual transactions. For more information, see [Table A.4, "HTML Variables: Display Information," on page 112](#).

To add a page style:

1. Begin at the Custom Payment Page Styles page.
2. Click **Add** or **Edit**.

Enter your page style preferences:

- **Page Style Name (required)**

Enter a name up to 30 characters long. The name can contain letters, numbers, and

underscores but no other symbols or spaces. The Page Style Name is used to refer to the page style in your PayPal account and in the HTML FORM `page_style` variable for your Website Payment buttons.

- **Header Image URL (optional)**

Enter the URL for an image that should appear at the top left of the payment page. Maximum size of the image is 750 pixels wide by 90 pixels high; larger images are reduced to this size. The image must be in a valid graphics format such as gif, jpg, or png.

IMPORTANT: PayPal recommends that you enter an image URL only if the image is stored on a secure (https) server. Otherwise, your customer's web browser displays a message that the payment page contains insecure items.

- **Header Background Color (optional)**

Enter the background color for the header using HTML hex code. The color code must be six digits long and should not contain the # symbol. If the Header Image URL is present, the header is a 750 pixel wide by 90 pixel high space at the top of the payment page. If the Header Image URL is not present, the header height is only 45 pixels high.

- **Header Border Color (optional)**

Enter the border color for the header using HTML hex code. The color code must be six digits long and should not contain the # symbol. The header border is a two-pixel perimeter around the header space.

- **Background Color (optional)**

Enter the background color for the payment page using HTML hex code. The color code must be six digits long and should not contain the # symbol.

3. Click **Preview** to preview your page style, or click **Save** to save it.

Disallowed Colors

Because PayPal's error message system highlights errors in red, PayPal does not allow certain background colors that make these error messages unreadable.

A background color is allowed if you are able to preview the payment page with your chosen background color. If you receive an error message about the background color, the color is not allowed.

About Font Colors

PayPal dynamically changes font colors from black to white, depending on the background color. To confirm that these font changes comply with your font color selections, you should test your color settings on PayPal.

Making a Page Style Primary

When you make a page style primary, it is applied to all payment pages unless you specify otherwise on individual transactions.

NOTE: If you do not designate a page style as Primary, the default is the PayPal page style.

To make a page style primary:

1. Begin at the Custom Payment Page Styles page shown in [Figure 2.4, “Edit Custom Page Style Page” on page 27](#).
2. Click the radio button next to the page style you wish to make your primary style.
3. Click **Make Primary**.
4. Click **Make Primary** to confirm your choice.

Overriding Page Style Settings On Individual Transactions

Your primary page style is applied to all payment pages unless you specify otherwise. You can override this behavior by specifying custom page style variables on individual transactions.

To change the page style for a button you already created, replace the value of the `page_style` variable with the page style name you want to use. The next time the button is clicked, the subsequent payment pages appear in the new style.

When you specify custom payment page variables on individual transactions, the page variables override page styles set in your Profile or the `page_style` variable. Customization variables take precedence in the following order:

TABLE 2.1 Order of Page Style Customization Variables

	Custom Option	Description
1	Custom Payment Pages Variables on Individual Transactions	See Table A.4, “HTML Variables: Display Information,” on page 112 .
2	Primary Page Style on Individual Transactions	With the <code>page_style</code> variable, you can specify a page style on individual transactions that overrides any page styles set in your Profile.
3	Primary Page Style in Profile	You can create and set the primary style in your Profile.
4	Default PayPal Page Style in Profile	The default page style used when an alternative is not selected and designated as primary.

Streamlining Purchases with Website Payment Preferences

You can speed up your customers' purchases with three Profile settings:

- Account Optional
- Auto Return
- Automatic calculation of shipping and handling cost and taxes

These settings are part of the **Website Payment Preferences** of your account Profile **Selling Preferences**.

FIGURE 2.5 Website Payment Preferences on the Profile Summary Page



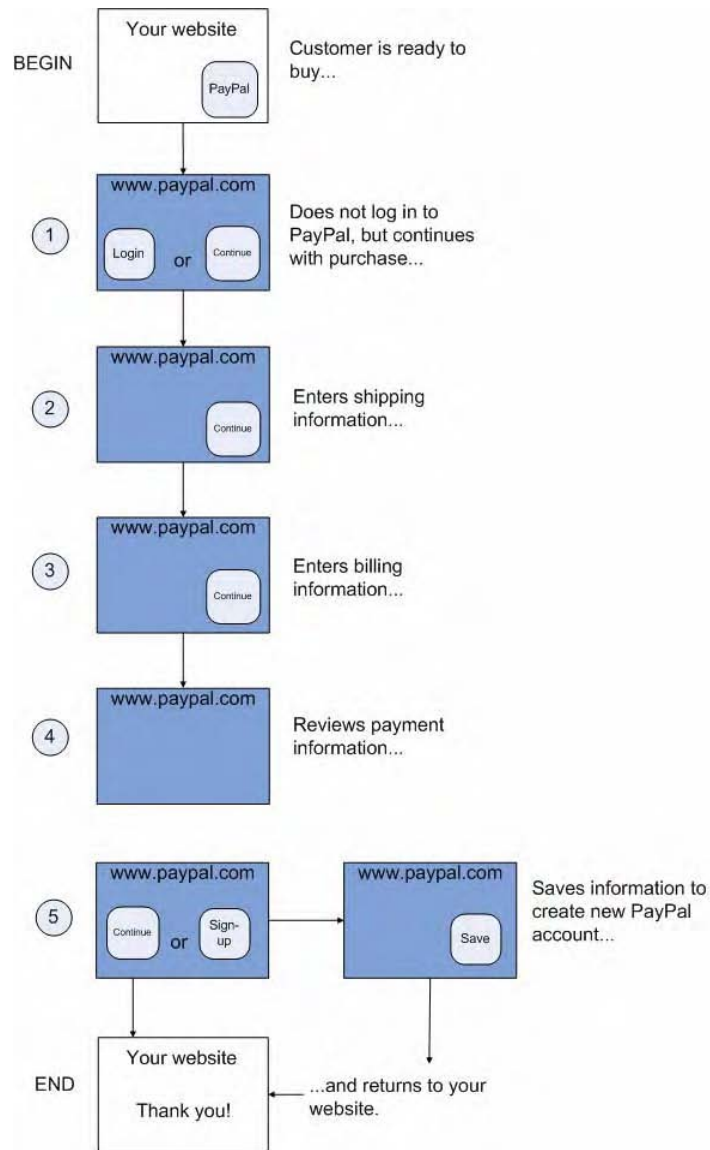
Account Optional or Website Payments Express

Account Optional (also known as Website Payments Express) is a **Profile** setting that allows customers new to PayPal to pay you by credit card without signing up for a PayPal account, thus shortening their time and effort.

Customers who have PayPal accounts go through the same Website Payments page sequence shown in [Figure 1.1, “Basic Website Payments Standard Page Sequence” on page 11](#).

Customers who are new to PayPal go through a page sequence that does not require PayPal signup, with the option to sign up after completing the payment.

FIGURE 2.6 Page Sequence with PayPal Account Optional



Turning PayPal Account Optional On or Off

1. Log in to your PayPal account at <https://www.paypal.com>.
2. Click the **Profile** subtab.
3. Click the **Website Payment Preferences** link in the **Selling Preferences** column. See Figure 2.5, “Website Payment Preferences on the Profile Summary Page” on page 30.
4. Scroll down to the **PayPal Account Optional** section of the page.
5. Select **On** to turn PayPal Account optional on, or **Off** to turn it off and use the basic Website Payments flow.

6. Click Save to save your preference.

What Your Customer Sees With Account Optional On

Step 1: Bob goes to the DesignerFotos website, makes his selections, and clicks **Add to Cart**.



Step 2: Since Bob is new to PayPal, he is taken to a billing information page. If he had a PayPal account, he could log in here to access his saved information. He is not a PayPal member, so he enters in his information and clicks Review Payment.

The screenshot shows the DesignerFotos checkout page with a PayPal integration. At the top, it says "DesignerFotos [PayPal's sample integration]". Below that, a summary bar indicates "2 Items, Subtotal with shipping: \$505.00". The main heading is "Create a PayPal Account". To the right, there is a "Payments by PayPal" logo. The form contains the following fields:

- Country: United States (dropdown)
- First Name: [text input]
- Last Name: [text input]
- Credit Card Number: 40 [text input]
- Expiration Date: mm / yy [text inputs]
- CSC: [text input] What's this? [link]
- Billing Address Line 1: [text input]
- Billing Address Line 2: [text input]
- City: [text input]
- State: [dropdown]
- Zip: [text input]
- Home Telephone: [text input]
- Email Address: [text input]

Below the form, there is a checkbox "Want to save your information with PayPal?" and a "Review Payment" button. On the right side, there is a box titled "ALREADY HAVE A PAYPAL ACCOUNT?" with fields for "Email:" and "Password:", a "Log In" button, and a link "Forgot email address or password?".

NOTE: If Payment Receiving Preferences are set to accept payments from customers only with confirmed addresses, Bob skips the shipping information page and goes directly to billing information in **Step 3**.

Using Your Merchant Account Profile and Tools

Streamlining Purchases with Website Payment Preferences

Step 3: Bob is taken to a review page. He clicks **Pay \$505.00 Now!** to complete his purchase.

DesignerFotos

Payments by
PayPal

Billing and Shipping **Review** Done

Review Your Payment

* indicates required fields

[Secure Transaction](#)

Item	Options	Quantity	Amount
Orchid (32" x 32")		1	\$250.00 USD
Pomeranian Puppy (32" x 32")		1	\$250.00 USD

Subtotal:

\$500.00 USD

Shipping & Handling:

\$5.00 USD

Total Amount:

\$505.00 USD

Pay \$505.00 Now!

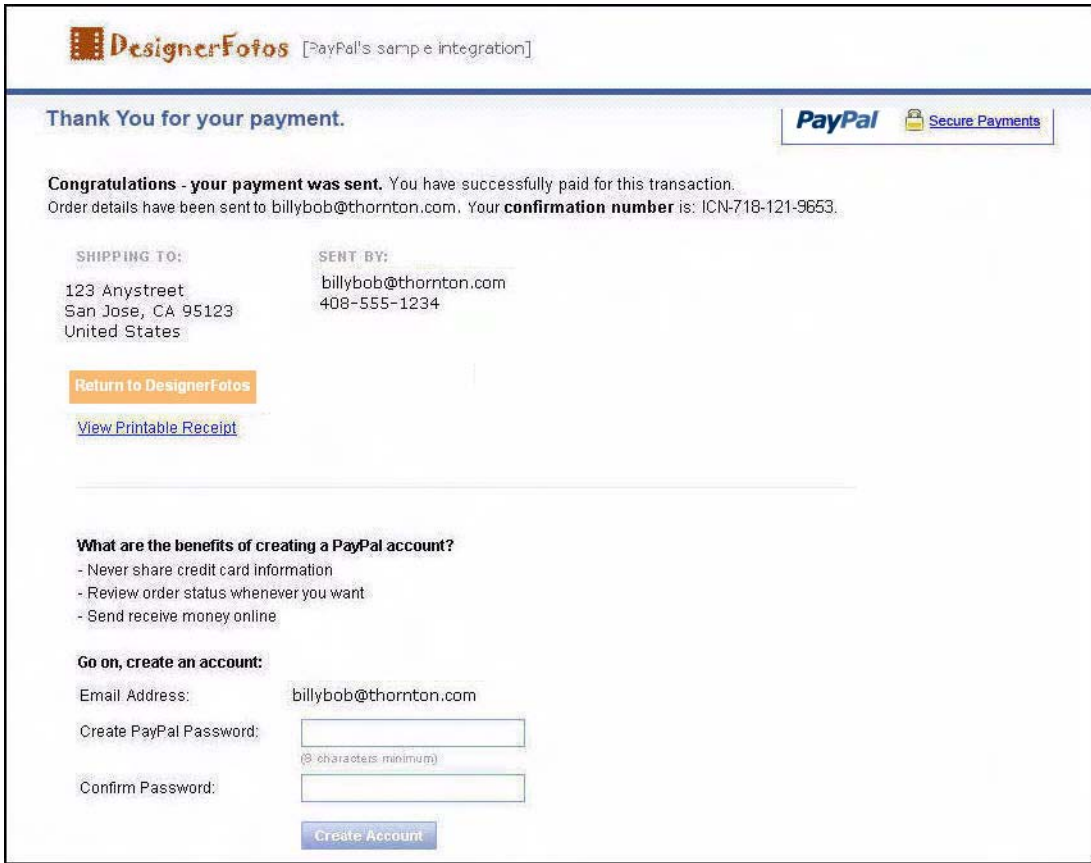
Payment Method: Mastercard [XXXX-5555] \$505.00 USD
[Change](#)

Shipping Address: 123 Anystreet
San Jose, CA 95123
United States
408-555-1234
[Change](#)

Contact Information: billybob@thornton.com
408-555-1234
[Change](#)

Pay \$505.00 Now!

Step 4: Bob is taken to a payment completion page and will receive an email receipt.



The screenshot shows a PayPal payment completion page for a merchant named "DesignerFotos". The page has a light blue header with the merchant's logo and the text "[PayPal's sample integration]". Below the header, there is a "Thank You for your payment." message. To the right of this message is the PayPal logo and a "Secure Payments" link. The main content area contains a "Congratulations - your payment was sent." message, stating that the payment was successful and that order details have been sent to billybob@thornton.com. The confirmation number is ICN-718-121-9653. Below this, there is a table with shipping and sender information. The shipping information includes the address 123 Anystreet, San Jose, CA 95123, United States. The sender information includes the email billybob@thornton.com and the phone number 408-555-1234. There are two links: "Return to DesignerFotos" and "View Printable Receipt". Below these links, there is a section titled "What are the benefits of creating a PayPal account?" with three bullet points: "Never share credit card information", "Review order status whenever you want", and "Send receive money online". At the bottom, there is a section titled "Go on, create an account:" with three input fields: "Email Address:" (pre-filled with billybob@thornton.com), "Create PayPal Password:" (with a note "(8 characters minimum)"), and "Confirm Password:". There is a "Create Account" button at the bottom right.

DesignerFotos [PayPal's sample integration]

Thank You for your payment.  [Secure Payments](#)

Congratulations - your payment was sent. You have successfully paid for this transaction.
Order details have been sent to billybob@thornton.com. Your **confirmation number** is: ICN-718-121-9653.

SHIPPING TO:	SENT BY:
123 Anystreet San Jose, CA 95123 United States	billybob@thornton.com 408-555-1234

[Return to DesignerFotos](#)

[View Printable Receipt](#)

What are the benefits of creating a PayPal account?

- Never share credit card information
- Review order status whenever you want
- Send receive money online

Go on, create an account:

Email Address: billybob@thornton.com

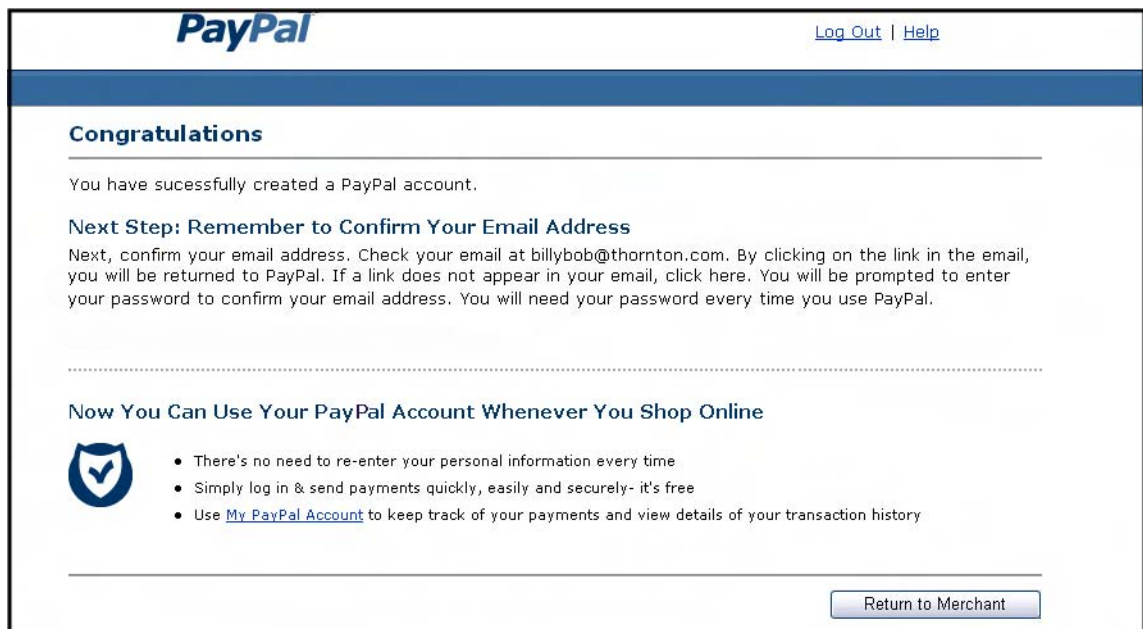
Create PayPal Password:
(8 characters minimum)

Confirm Password:

[Create Account](#)

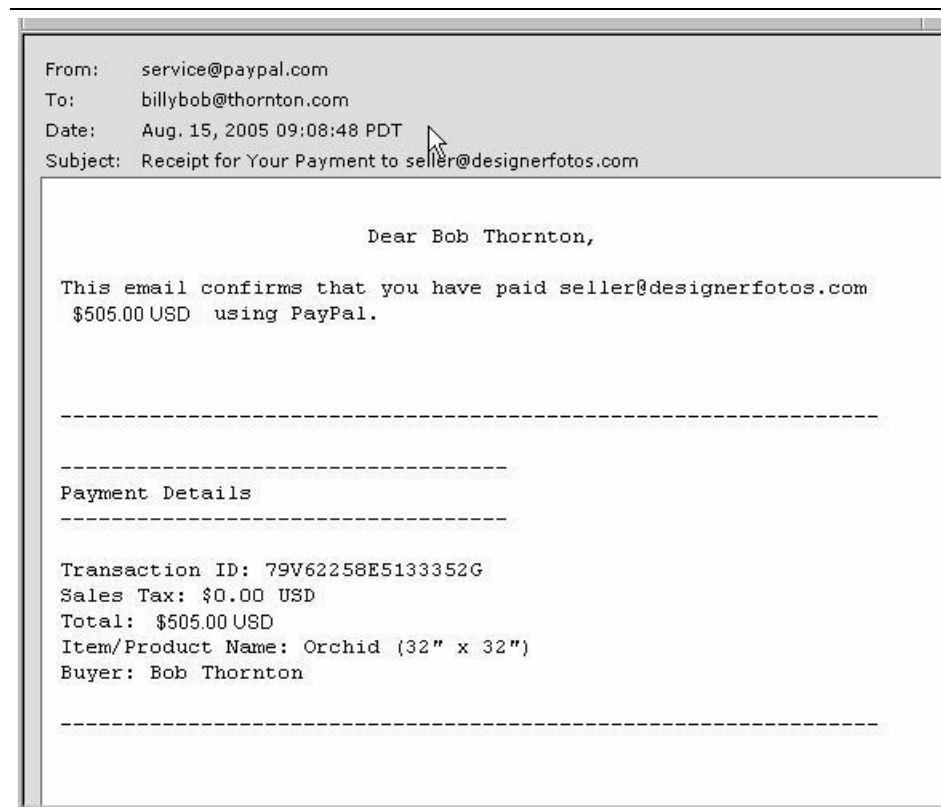
Because Bob is not a PayPal member, he can choose to sign up for a PayPal account on this page by entering his email address, selecting a password, and clicking Create Account.

Step 5: Bob sees a page that confirms the creation of his account.



If he clicks Return to Merchant, he is redirected back to the merchant's website.

Step 6: Bob receives an email receipt that confirms his payment and includes a copy of the payment details for this transaction.



Auto Return

With Auto Return for Website Payments, you can avoid making your customers click an extra button before returning to your website after completing a payment. Auto Return applies to all Website Payments, including Buy Now, Donations, Shopping Cart, and Subscriptions.

What Your Customer Sees with Auto Return On

With Auto Return on, instead of having to click a button on the **You Made a Payment** page (which is annotated as a circled 3 in [Figure 1.1](#) and shown in [Figure 1.5](#)), the customer sees a payment confirmation page for a few seconds before the browser is returned to your website, as shown in [Figure 2.7](#), “Momentary “You Made a Payment Page” with Auto Return On.”

FIGURE 2.7 Momentary “You Made a Payment Page” with Auto Return On



Turning On Auto Return

To turn Auto Return on:

1. Log in to your PayPal account at <https://www.paypal.com>.
2. Click the **Profile** subtab.
3. Under the **Selling Preferences** column, click **Website Payment Preferences**. See [Figure 2.5, “Website Payment Preferences on the Profile Summary Page” on page 30](#).
4. Under **Auto Return for Website Payments**, click the **On** radio button to enable Auto Return.

Website Payment Preferences [Back to Profile Summary](#)

Auto Return for Website Payments
Auto Return for Website Payments brings your buyers back to your website immediately after payment completion. Auto Return applies to PayPal Website Payments, including Buy Now, Donations, Subscriptions, and Shopping Cart. [Learn More](#)

Auto Return: ☒ On ☐ Off

Return URL: Enter the URL that will be used to redirect your customers upon payment completion. This URL must meet the guidelines detailed below. [Learn More](#)

Return URL:

5. In the **Return URL** field, enter the URL to which you want your buyers redirected after payment completion.

NOTE: If the Return URL you supply is not valid, PayPal displays the standard **You Made a Payment** page when payment is complete.

6. Click Save.

Setting Return URL on Individual Transactions

With Auto Return turned on in your Profile, you can set the value of the return URL on each individual transaction, overriding the value you have stored on PayPal. For example, you might want to return the customer's browser to a URL on your site that is specific to that customer, perhaps with a session-id or other transaction-related data included in the URL.

To set the return URL for a transaction, include the `return` variable in the HTML FORM:

```
<INPUT TYPE="hidden" NAME="return" value="URLspecificToThisTransaction">
```

Subscriptions Password Management and Auto Return

If you use or plan to use Subscriptions Password Management, you must make sure that Auto Return is turned off in order to display the PayPal-generated username and password to the buyer.

NOTE: You can use Auto Return with Subscriptions, which is a separate feature from Subscription Password Management. For more information about Subscriptions, see the *Subscriptions and Recurring Payments Guide*, which is available on the PayPal website.

Automatic Calculation of Shipping and Handling Cost and Tax

You can set up your PayPal account to automatically calculate and charge shipping and sales tax (also called value added tax or VAT).

You can set up your PayPal account to automatically calculate and charge shipping.

To view or modify your sales tax and shipping charges:

1. Log in to your PayPal account at <https://www.paypal.com>.
2. Click the **Profile** subtab of the **My Account** tab.
3. In the **Selling Preferences** column, click **Sales Tax** or **Shipping Calculation**.

Sales or Value Added Tax Collection

You can charge your customers tax by choosing a country or state from the **Country** and **U.S. State** drop-down menus, and entering your tax rate for that state. All customers who reside in the country or state you select are automatically charged the tax rate you choose. You can specify a different tax rate for each U.S. state and any of the listed countries.

IMPORTANT: If you are entering the rate for a U.S. state, ensure that the **Country** drop-down menu is set to **United States**.

With the radio buttons, you can apply tax either to the item itself or to an item and any shipping and handling costs.

Click **Save** to save your changes.

Overriding Tax Setting on Individual Transactions

Regardless of a customer's location, you can set a flat tax amount on an individual transaction or items in the transaction. For more information, see [“Setting the Tax for the Entire Cart” on page 78](#).

Shipping Calculation

Determine if you want to charge shipping as a flat amount or a percentage of the total purchase amount.

Flat Amount. A flat amount is based on the subtotal of a purchase. Choose the **Flat Amount** radio button (indicated by \$), and enter a flat amount for each currency amount increment. Click **Save** to save your changes.

EXAMPLE 2.1 Flat Amount Shipping Calculation

Assume your flat amount settings are as follows:

\$0.00 through \$49.99 = \$3.00

\$50.00+ = \$6.00

If the subtotal is \$36.50, your customer is charged \$3.00 for shipping, and the total purchase \$39.50.

If the subtotal is \$66.50, your customer is charged \$6.00 for shipping, and the total purchase \$72.50.

Percentage. A percentage is based on the subtotal of a purchase. Choose the **Percentage** radio button (indicated by %), and enter a percentage for each currency amount increment. Click **Save** to save your changes.

EXAMPLE 2.2 Percentage Shipping Calculation

Assume your percentage settings are as follows:

\$0.00 through \$49.99 = 5%

\$50.00+ = 4%

If the subtotal is \$36.50, your customer is charged $5\% \times \$36.50 = \1.83 for shipping, and the total purchase \$38.33.

If the subtotal is \$66.50, your customer is charged $4\% \times \$66.50 = \2.66 for shipping, and the total purchase \$69.16.

Overriding Shipping Calculation on Individual Transactions

You might want to set a special shipping rate for an item; for example, if the item is especially heavy and costs more to ship or if it is a service which does not require shipping charges. To charge a different shipping amount for an item, include the shipping cost in the `shipping` and `handling_cart` FORM for the button.

You must set your Profile to allow individual transactions to override the Profile shipping calculation settings:

1. Go to the **Shipping Calculations** page in your Profile.
2. Click the checkbox labeled **Click here to allow transaction-based shipping values to override the profile shipping settings listed above (if profile settings are enabled)**.

Click **Save**.

Blocking Certain Kinds of Payment

Payment Receiving Preferences let you block the types of payments you receive.

FIGURE 2.8 *Payment Receiving Preferences*



Blocking Payments From U.S. Users Without a Confirmed Address

You can better manage your risk by blocking payments where the buyer chooses not to share his Confirmed Address with you. PayPal provides Confirmed Addresses to help you make informed decisions when shipping goods. To be eligible for PayPal's Seller Protection Policy (SPP), and to help reduce your risk of dealing with fraudulent buyers, ship to a buyer's Confirmed Address.

There are three choices for this preference:

- **Yes:** All payments from U.S. buyers without a Confirmed Address are blocked. All U.S. buyers must provide a Confirmed Address in order to pay you.

- **No:** All payments are accepted. To maximize your sales, select No.
- **Ask Me:** You can choose whether to accept or deny payment without a Confirmed Address on a case-by-case basis. This option allows you the flexibility to decide whether you want to take on the risk of not having the buyer's Confirmed Address for each transaction. If you accept the payment, it becomes a completed transaction. If you deny a particular payment, the sender of the payment is notified that the payment has been denied and is credited with the payment amount. PayPal does not charge fees for denied payments.

For a detailed description of how Confirmed Address and other settings affect the PayPal billing and shipping addresses, see [Appendix B, "Billing and Shipping Address Settings."](#)

Blocking Payments in a Currency You Do Not Hold

When you receive a payment in a currency you do not hold, PayPal prompts you to open a balance for that currency, convert it to your primary balance, or deny the payment. Payments in currencies for which you hold a balance are applied to the appropriate balance. You see a summary of each currency balance in your Account Overview page. For more information about managing your currency balances, see "PayPal-Supported Currencies" on page 56."

There are three choices for this preference:

- **Yes:** Accept the payment regardless of the currency in which the payment is made.
- **No, accept them and convert them to U.S. Dollars:** Accept the payment but automatically converts to U.S. Dollars.
- **Ask Me:** Transaction-by-transaction, you can choose to accept or deny a payment in a currency you do not currently hold. If you accept the payment, it becomes a completed transaction. If you deny a particular payment, the sender of the payment is notified that the payment has been denied and is credited with the payment amount. PayPal does not charge fees for denied payments.

Blocking Payments From Users With Non-U.S. PayPal Accounts

Because many international addresses cannot be confirmed, you may choose to block payments from users with non-U.S. PayPal accounts in order to qualify for the Seller Protection Policy.

Blocking Payments From the Pay Anyone Subtab

You can choose whether or not to receive payments initiated via the **Pay Anyone** subtab of the **Send Money** tab on the PayPal website. Selecting this option might help you manage your account, because the payments you receive will be associated with a specific item or transaction that you defined.

If you block these payments, you accept only payments initiated from Buy Now buttons, Donations, Shopping Cart, Subscriptions and Recurring Payments, Winning Buyer Notification, Mass Payments, Money Requests, Smart Logos, or eBay Checkout Payments.

Blocking Payments Funded By Credit Cards When Sender Has a Bank Account

You can force customers to pay you with a bank account or PayPal funds if they are able to do so. However, if they cannot pay you using a bank account or PayPal funds, they still have the option to pay with a credit card.

This preference can also help to reduce your risk of chargebacks. Verified users are users who have confirmed their bank accounts with PayPal or have been otherwise verified by PayPal. Because most Verified members have the option of paying with their bank accounts (via eCheck or Instant Transfer), this preference does not prevent users from sending you money. When they pay with PayPal's Instant Transfer, you receive the payment instantly, just as when they pay with a credit card. Users who have not confirmed their bank accounts with PayPal can still send you money funded by credit cards.

Blocking Payments Funded By eChecks

You can block eCheck payments. Because eCheck payments take three to four business days to clear, you might want to block them for your Instant Purchase and Buy Now buttons.

If you choose to block these payments, users who attempt to pay via eCheck are prompted to add a credit card to their account before completing the transaction.

If you choose not to block these payments, you can receive eCheck payments through PayPal Website Payments or Auction Logos. eCheck payments are listed as Pending and are not credited to your PayPal account for three to four business days.

Adding Your Credit Card Statement Name

On the Payment Receiving Preferences page, you can specify the name that appears on your customers' credit card statements.

FIGURE 2.9 Adding a Credit Card Statement Name

.....

The Credit Card Statement Name is the name that will appear on your customers' credit card statements.

The name can be 11 alpha-numeric characters in length, including spaces.

For some payments, the name can be extended to 19 alpha-numeric characters in length, including spaces. [Learn More](#)

Credit Card Statement Name: (11 Character Maximum)

Extended Credit Card Statement Name: (19 Character Maximum)

When a buyer pays you by credit card, your credit card statement name appears with the word PAYPAL * next to the charge on the statement (for example, PAYPAL *MYCCNAME). The Credit

Card Statement Name can be up to 11 characters long, including spaces, but must not contain special characters (such as &, #, or _). The name is converted to all capital letters and might be truncated by some credit card processors.

The Credit Card Statement Name should accurately reflect your business or legal name.

Getting Customer Contact Telephone Numbers

“Customer Contact Information Telephone” is an option that gives you a contact telephone number for your customer. When you activate this option, customers are prompted to include a contact telephone number with their payment information.

IMPORTANT: In accordance with PayPal’s User Agreement, you may use this Contact Telephone Number only to communicate with the buyer about the related purchase. You may **not** use this number for unsolicited commercial messages.

You can make the contact telephone number optional or required, or you can turn it off. “Off” is the recommended default option because customers value their privacy and prefer to minimize unsolicited communications.

When you require the buyer’s contact telephone number, your buyer sees the prompt during purchase.

FIGURE 2.10 Prompt for Customer Contact Telephone Number

Contact Telephone Number

When you activate this option, your customers will be asked to include a Contact Telephone Number with their payment information. [Learn more](#)

Note: Selecting **On (Required Field)** could have a negative effect on buyer conversion.

Contact Telephone

- ☐ On (Optional Field)
- ☐ On (Required Field)
- ☐ Off (PayPal recommends this option)

Activating Customer Contact Telephone

Follow these steps to activate the Customer Contact Information Telephone option:

1. Log in to your PayPal account at <https://www.paypal.com>.
2. Click the **My Account** tab.
3. Click the **Profile** link.
4. Click the **Website Payment Preferences** link.
5. Select the option you prefer: **On (Optional Field)**, **On (Required Field)**, or **Off (Recommended)**.

6. Complete the rest of the selections on the page.
7. Click Save.

Language Encoding Your Data

Websites that use PayPal in different parts of the world work with different languages. Human languages are represented in computing by the terms “character set” and “character encoding”.

A character set is a computer representation of all the individual possible letterforms or word symbols of a language. For instance, ASCII (or American Standard Code for Information Interchange) is a common character set that has been used for decades to represent the letterforms, numbers, punctuation, and symbols of American English. Another example of a character set is Big 5, which is one of the most widely implemented Chinese character sets. Character encoding, on the other hand, refers to how a particular character set is represented internally in data processing; that is, how the individual characters are actually stored and operated on. There many different kinds of character encodings. For example, an encoding might allow 7, 8, or 16 computer bits for a single character.

PayPal refers to these two terms together as language encoding.

Changing Your Language Encoding

With your **Language Encoding** preferences, you can precisely control the encoding of the data that PayPal should expect from your website’s use of any PayPal Website Payment button, and the encoding of the data that your website expects to receive back from PayPal

When you sign up for a new business account with PayPal, the PayPal system determines your character set and its encoding based on your country of origin, as specified by you during signup. For example, if your postal address indicates France, by default your **Selling Preferences** language encoding is set to a Western language character set.

Navigating Your Profile: Language Encoding

To set the default language encoding for your PayPal Business account, log in to your account and click the **Profile** tab. In the Selling Preferences column, click **Language Encoding**.

FIGURE 2.11 Profile Selling Preferences for Language Encoding



Changing Your Website Language

The **Language Encoding** page displays the setting for your website's language, as shown in the following illustration. With the **Your website's language** drop-down menu, you change the setting.

FIGURE 2.12 *Language Encoding Settings: Basic Choices*

The screenshot shows the PayPal website interface. At the top right, there are links for [Log Out](#), [PayPal Home](#), [Help](#), and [Security Center](#). Below these is the PayPal logo. A navigation bar contains tabs for **My Account**, **Send Money**, **Request Money**, **Merchant Services**, **Auction Tools**, and **Profile**. Under the **My Account** tab, there are sub-links for [Overview](#), [Add Funds](#), [Withdraw](#), [History](#), [Resolution Center](#), and **Profile**. The main heading is **Language Encoding**. Below this, a text block explains: "Use the following drop-down menu to select the language you use on your website. The language on your website determines the encoding method that is used for the data sent to PayPal from the website payment buttons." Below the text is a label "Your website's language:" followed by a drop-down menu currently showing "Western European Languages (including English)". At the bottom of the form are three buttons: **Save**, **More Options**, and **Cancel**. A footer section contains a list of links: [Mobile](#), [Mass Pay](#), [Money Market](#), [ATM/Debit Card](#), [BillPay](#), [Referrals](#), [About Us](#), [Accounts](#), [Fees](#), [Privacy](#), [Buyer Credit](#), [Security Center](#), [Contact Us](#), [User Agreement](#), [Developers](#), [Shops](#), and [Gift Certificates/Points](#). Below the links is the text "PayPal, an eBay company" and a copyright notice: "Copyright © 1999-2004 PayPal. All rights reserved. [Information about FDIC pass-through insurance](#)".

To change the language of data PayPal should expect from your website, click the **Your website's language** drop-down menu and select a different language, as shown in [Figure 2.13](#), “Website Language Preference.”

FIGURE 2.13 Website Language Preference

The screenshot displays the PayPal 'Language Encoding' page. At the top, there are links for 'Log Out', 'PayPal Home', 'Help', and 'Security Center'. Below these are tabs for 'My Account', 'Send Money', 'Request Money', 'Merchant Services', 'Auction Tools', and 'Product'. Under the 'My Account' tab, there are sub-tabs: 'Overview', 'Add Funds', 'Withdraw', 'History', 'Resolution Center', and 'Profile'. The 'Language Encoding' section is active, showing instructions: 'Use the following drop-down menu to select the language you use on your website. The language on your website determines the encoding method that is used for the data sent to PayPal from the website payment buttons.' A drop-down menu labeled 'Your website's language:' is open, showing the following options: 'Western European Languages (including English)' (selected), 'Chinese (Traditional)', 'Chinese (Simplified)', 'Japanese', 'Korean', and 'Russian'. A 'Cancel' button is located to the right of the menu. At the bottom of the page, there are links for 'Mobile', 'Mass Pay', 'Money Market', 'ATM/Debit Card', 'BillPay', 'Referrals', 'About Us', 'Accounts', 'Fees', 'Privacy', 'Buyer Credit', 'Security Center', 'Contact Us', 'User Agreement', 'Developers', 'Shops', and 'Gift Certificates/Points'. The footer includes the text 'PayPal, an eBay company' and 'Copyright © 1999-2004 PayPal. All rights reserved. Information about FDIC pass-through insurance'.

Click **Save** to save your selection or **Cancel** to leave the setting unchanged.

More Encoding Options

If you want to specify the exact standard name of your website's character encoding, click **More Options** on the **Language Encoding** page to open the More Encoding Options page shown in [Figure 2.14](#), “More Language Encoding Options.”

The **More Encoding Options** page allows you to specify the character encoding PayPal should expect from your website and the encoding of data PayPal sends to your website.

FIGURE 2.14 More Language Encoding Options

Log Out | PayPal Home | Help | Security Center

PayPal

My Account | Send Money | Request Money | Merchant Services | Auction Tools | Profile

Overview | Add Funds | Withdraw | History | Resolution Center | Profile

More Encoding Options

Use the following drop-down menu to select the encoding used on your website.

Encoding: windows-1252

Do you want to use the same encoding for data sent from PayPal to you (e.g., IPN, downloadable logs, emails)?

☒ Yes

☐ No, use: windows-1252

For more information on adding multiple languages to your website payment buttons or IPN, please refer to the [Integration Guide](#).

Save Cancel

The encoding selection in the **Encoding** drop-down menu is based on the country of origin you specified at signup.

To change the encoding selection, click the **Encoding** drop-down menu and select one of the available encodings. For a complete list of supported encodings, see “[Table 9.2, “Character Sets and Encodings Supported by PayPal,”](#) on page 105.

For data that PayPal sends to you, you have the option to specify the same or a different encoding. To use the same encoding as your website, click the **Yes** radio button. To use a different encoding, click the **No, use** radio button and select the desired encoding from the associated drop-down menu.

Setting Language Encoding On Individual Transactions

You can set the language encoding on each individual transaction with the `charset` variable. See “[Setting the Character Set: charset](#)” on page 105.

Multi-User Access to Your PayPal Account

With Multi-User Access, you can set up multiple logins with different permissions for business functions in your PayPal account, so employees have access only to the parts of your account they need to do their work. For example, you can give your customer service representatives their own login with limited permissions, so that they have the ability only to view balances and make refunds but not the ability to edit profiles, send money, or withdraw funds.

You can add up to seven separate logins to your account. You might want to establish a separate username and password for each employee, and grant each user the minimum access necessary. If an employee forgets or loses a password, you can log in and reset it.

NOTE: Remember to revoke the privileges of any employee that leaves your company.

To set up Multi-User Access:

1. Log in to your PayPal Business account.
2. Go to your Profile
3. Click **Multi-User Access**.

FIGURE 2.15 Multi-User Access Link in Account Profile Summary



4. Specify your Administrative Contact email address, which is the email address that receives notifications about your account activity.

NOTE: You must confirm this email address before you can proceed.

5. For each login, specify a User ID, password, and which account privileges the user has permission to use.

FIGURE 2.16 Multi-User Access: Adding a User

Add Users [See Demo](#)

Give a user permission to access this account by creating a User ID below. Begin by providing the user's full name (first and last), a user name and a password.

You currently have 0 users added to your account and may add more.

User's Name:
(First and Last)

The User ID must be at between 10 and 16 characters long, can only contain English and German letters and numbers (no special characters), and is NOT case sensitive.

User ID:

Re-enter User ID:

Password:

Re-enter Password:

Multi-User Access
Check the box next to each of the privileges for which this user has permission:

- ☐ Send Money
- ☐ Request Money
- ☐ Add Funds
- ☐ Refunds
- ☐ Withdraw Funds
- ☐ Cancel Payments
- ☐ View Balance
- ☐ View Profile
- ☐ Edit Profile
- ☐ Settlement File & Scheduled Downloads
- ☐ API Activation & Authorization
- ☐ Authorization & Settlements

Managing Currency Balances

Use the **Currency Balances** section of your Profile to manage your currency balances:

- Select your primary currency
- Open or close a currency balance
- Transfer funds between currency balances. Funds transferred from one currency balance to another are exchanged at a competitive rate.

You can maintain a PayPal balance in any of the following currencies.

TABLE 2.2 Currencies Allowed for PayPal Balances

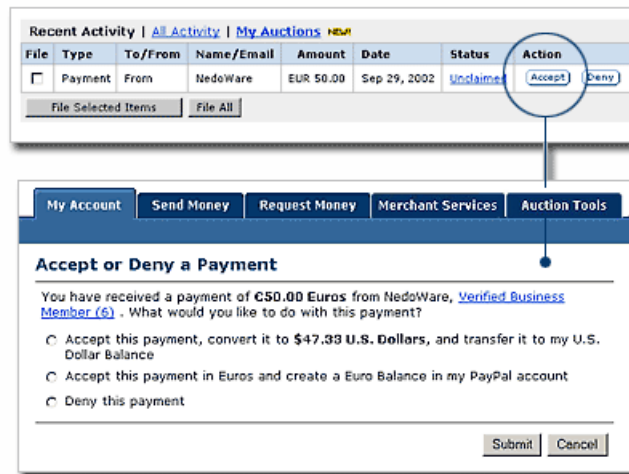
ISO-4217 Code	Currency
AUD	Australian Dollar
CAD	Canadian Dollar
CHF	Swiss Franc
CZK	Czech Koruna
DKK	Danish Krone
EUR	Euro
GBP	Pound Sterling
HKD	Hong Kong Dollar
HUF	Hungarian Forint
JPY	Japanese Yen
NOK	Norwegian Krone
NZD	New Zealand Dollar
PLN	Polish Zloty
SEK	Swedish Krona
SGD	Singapore Dollar
USD	U.S. Dollar

Accepting or Denying Cross-Currency Payments

You choose which currencies you accept and how you would like to accept them. You can set your **Payment Receiving Preferences** to handle cross-currency payments. See “[Blocking Certain Kinds of Payment](#)” on page 41.

When a customer sends a payment in a currency you hold, the funds appear in your account in the balance of that currency. When a customer sends a payment in a currency you do not hold, you can accept or deny the payment.

FIGURE 2.17 Accepting or Denying a Cross-Currency Payment



Receiving fees are assessed in the currency in which the funds were sent. Payments converted to your primary currency are converted at a competitive exchange rate.



Using Your Merchant Account Profile and Tools

Accepting or Denying Cross-Currency Payments

3

Single-Item Payment: Buy Now and Donations

Buy Now or Donations buttons are suitable for single-item payments or purchases. A single Buy Now button can sell one or more copies of the same item. However, to sell different items you must create separate Buy Now Buttons for each or use PayPal's Shopping Cart. You can use to a Donations button to collect a pre-determined amount, or you can allow your donors to choose the amounts of their donations. [“Example of the Basic Page Sequence” on page 12](#) shows how Buy Now or Donations work.

You can create a Buy Now or Donation button in two ways:

- Use PayPal's online Buy Now or Donation button factory to create an HTML FORM you copy to your website or to an email message.
- Using the webpage tools of your own choice, construct your own HTML FORM based on the example in [“Sample Buy Now Button HTML and Hyperlink” on page 59](#) and the descriptions of variables in [Appendix A, “Website Payments Standard HTML Variables.”](#)

Using Buy Now or Donations Button Factory

The button factories for Buy Now and Donations work in exactly the same way, except they prompt for slightly different information. These differences are noted in the following steps.

To create HTML with the Buy Now or Donations button factory:

1. Log in to your PayPal account at <https://www.paypal.com>.
2. Click the **Merchant Services** tab.
3. Click **Buy Now Buttons** or **Donations**.
4. Enter the details of your item. All fields are optional.

Buy Now Button Fields

- **Item Name/Service:** Enter the name of the item or service you wish to sell. If you do not enter anything in this field, your customers can complete it at time of purchase. PayPal recommends entering an item name to make it easier for you to ship the order.
- **Item ID/Number:** If you have an ID or tracking number for your item, enter it here. This field is not be displayed to your customers at the time of payment, but they see it in their transaction details on the PayPal website.
- **Item Price:** Enter the price of the item you wish to sell. If you do not enter anything in this field, your customers can complete it. PayPal recommends entering an Item Price to make it easier for you to collect the correct amount.

Donations Button Fields

- **Donation Name/Service:** Enter the reason for payment or the name of your organization/charity here. If you do not enter anything in this field, your donors can complete this field.
- **Donation ID/Number:** You can use this field to differentiate payments (e.g. to enter a campaign name). This field is not displayed to your donors at the time of payment, but they see it in their transaction details on the PayPal website.
- **Donation Amount:** If you would like to collect a pre-determined amount, you can enter it in the **Donation Amount** field. If you would like your donors to choose their donation amounts, do not enter a price in this field. Users are prompted to enter a donation amount when they make payment.

Common Fields

- **Currency:** Choose the currency in which you would like this payment to be denominated. This field defaults to the currency of your primary balance.
- **Buyer's Country:** To display the PayPal login or sign-up page in a certain language, select a country where that language is spoken from the pull-down menu.

5. Choose a image for your button.

If you are going to receive payments or donations from your website, choose the image for the button you would like your customers to click to make their purchase. To display your own image, enter the URL of the image's location in the URL field.

NOTE: PayPal recommends that you enter an image URL only if the image is stored on a secure (https) server. Otherwise, your customer's web browser displays a message that the payment page contains insecure items.

If you are creating an email link, go to [“Adding More Details to the Button” on page 57](#).

6. Security Settings

PayPal offers the option to encrypt your button's HTML code. Encryption ensures that an item's price and other details cannot be altered by a third party, thus increasing the security of your transactions. Select **Yes** to encrypt your code, or **No** to leave it editable.

PayPal highly recommends encrypting your button code. However, there are three limitations:

- Encrypted button HTML is not editable. If you want to modify your button code manually, select **No** for this option.
- You cannot encrypt your button if it has dynamically-generated code from the **Add More Options** page, such as drop-down Options fields (see step 5). If you need Option fields for your products, select **No** to turn encryption off.
- If you choose to encrypt your button, you cannot create an email link.

Adding More Details to the Button

If you do not have additional details to add to your button (such as sales tax, shipping, or your logo), click **Create Button Now** and go to [“Copy and Paste the HTML Code” on page 58](#). Otherwise, click **Add More Options**.

If you have additional details for your button, follow these steps:

1. For Buy Now buttons, Add Shipping and Sales Tax

- **Shipping Cost Calculation:** If you have specified shipping rates in your Profile, they are listed here.
- **Sales or Value Added Tax Calculation:** If you have specified your tax rate in your Profile, it is listed here. For more information, see [“Automatic Calculation of Shipping and Handling Cost and Tax” on page 39](#).

2. For Buy Now buttons, add Option fields to your button

Creating an option field allows your customers to specify information about their purchases. You can use Option fields to specify options like color, size, or gift-wrapping. These options must not change the price of an item but let you collect additional information from your customer without extra email communication. Each Buy Now Button can have up to two option fields, and you can use a drop-down menu or text box to collect the information.

Unfortunately, Option fields and button encryption cannot be used if you are creating an email hyperlink. If you would still like to include Buy Now links in email messages, you can try either sending HTML emails, providing a link to the Buy Now Button (with Option fields) on your website, or asking your user to include the optional information in the **Note** field.

- **Option Field Type:** Choose the type of option field: drop-down menu or text box. If you choose drop-down menu, you must enter the menu choices. If you choose text box, your customers enter their choice.
- **Option Name:** Enter the name of your option. The Option Name field has a 60-character limit.
- **Drop-Down Menu Choices:** If you are using a drop-down menu, you must enter your menu choices. There is a 30-character limit per choice, with a maximum of 10 choices. Use a carriage return (press **ENTER**) to separate each choice.

3. Customize your payment pages

- **Custom Payment Page Style:** Give your customers a seamless payment experience by customizing PayPal’s payment pages to match your website’s style. If you already added Custom Payment Page Styles in your Profile, they are listed here. Choose the page style you would like to appear when your customer clicks your Buy Now button. To learn more about creating page styles, see [“Branding PayPal’s Payment Pages” on page 25](#).

4. Customize your customer’s experience

- **Successful Payment URL:** Enter the URL for the page you want your customers redirected to after they have completed their payments. Unless you have enabled Auto

Return, your customers see a payment completion page where they click **Continue** and return to the Successful Payment URL you have specified. If you do not enter a Successful Payment URL, customers clicking this link are taken to a PayPal webpage.

- **Cancel Payment URL:** Enter the URL where you want to send your customers if they cancel their payments at any point in the Buy Now payment flow. If you do not enter a Cancel Payment URL, customers who click this link are taken to a PayPal webpage.

5. Miscellaneous Options

- **Quantity:** If you want your customers to purchase more than one item or service, choose **Yes** to prompt them to enter the quantity they want. If you choose **No**, the quantity is set to 1, and your customers can purchase only one item per payment.
- **Shipping Address:** If you want to prompt customers for a shipping address, choose **Yes**. If you choose **No**, your customers are not asked to provide a shipping address.

6. Collect additional information from your customers

- **Note:** Select **Yes** if you want your customers to be able to include a note to you with their payment. If you select **No**, your customers cannot include a note.
- **Note Title:** If you allow your customers to include a note with their payments, you can specify a title for the note field. By specifying a title, you can prompt your buyers to enter specific information, such as a User ID or special instructions. There is a 40-character limit on your note field title. If you do not enter a title, your customers see **Special Instructions (optional)** as the note field title.

7. Choose an email address to receive payment

If you have more than one confirmed email address, you can specify the address where you want to receive your email payment notifications when your customers pay you.

Copy and Paste the HTML Code

When you completed the Buy Now Button Factory form, click **Create Button Now**.

If your customers pay on your website:

1. Copy the code from the **HTML for Websites** text box by highlighting all the text and pressing Ctrl+C, or by highlighting all the text, right-clicking your mouse, and selecting **Copy**.
2. Open the webpage where you want to collect payment.
3. Paste the code you just copied into your webpage file wherever you would like the image to appear, typically next to the description of the item or service, either by pressing Ctrl+V or by right-clicking your mouse and selecting **Paste**.

If your customers pay by email:

NOTE: If you use Encrypted Website Payments (EWP), you cannot create an email link.

1. Copy the code from the **Link for Emails** text box by highlighting all of the text and pressing Ctrl+C, or by highlighting all of the text, right-clicking your mouse, and choosing **Copy**.
2. Open the email you want to send.
3. Paste the code you just copied into your email either by pressing Ctrl+V or by right-clicking on your mouse and selecting the **Paste** option.
4. When your customers receive the email, the code appears as a link. Clicking the link takes them to your PayPal payments page.

HTML Tip: Ensure that the HTML code on your webpage exactly matches the code you copy from PayPal. Some HTML editors might change some characters in the code. In addition, be sure you paste the code into a field that accepts HTML. If you paste the code into a standard text field, the code is treated as displayable text.

Sample Buy Now Button HTML and Hyperlink

The HTML for a Buy Now Button looks similar to the following. Several optional fields are shown.

EXAMPLE 3.1 HTML for Buy Now Button

IMPORTANT: You can change the values for any of the variables, with the exception of the first two lines.

```
<form target="paypal" action="https://www.paypal.com/cgi-bin/webscr"
method="post">
<!-- a Buy Now button is specified by the command _xclick -->
<input type="hidden" name="cmd" value="_xclick">
<input type="hidden" name="business" value="seller@designerfotos.com">
<!-- Allow customer to enter desired quantity -->
<input type="hidden" name="undefined_quantity" value="1">
<input type="hidden" name="item_name" value="Baseball Hat">
<input type="hidden" name="item_number" value="123">
<!-- No currency_code variable has been specified,
so monetary amount is assumed to be USD -->
<input type="hidden" name="amount" value="5.95">
<!-- Passthrough variables for order tracking or other purpose -->
<input type="hidden" name="custom" value="merchant_custom_value">
<input type="hidden" name="invoice" value="merchant_invoice_12345">
<input type="hidden" name="charset" value="utf-8">
<input type="hidden" name="no_shipping" value="1">
<input type="hidden" name="image_url"
value="https://www.designerfotos.com/logo.gif">
<input type="hidden" name="return"
value="http://www.designerfotos.com/thankyou.htm">
```

Single-Item Payment: Buy Now and Donations

Sample Buy Now Button HTML and Hyperlink

```
<input type="hidden" name="cancel_return"
value="http://www.designerfotos.com/cancel.htm">
<!-- Do not prompt customer to include a note with the purchase -->
<input type="hidden" name="no_note" value="1">
<table>
  <tr>
    <td>
      <!-- Allow customer to choose product options -->
      <input type="hidden" name="on0" value="Color?">Color?
      <select name="os0">
        <option value="Red">Red
        <option value="Green">Green
        <option value="Blue">Blue</select>
      </td>
    </tr>
  </table>
  <input type="image" src="http://images.paypal.com/images/x-click-but01.gif"
name="submit" alt="Make payments with PayPal - it's fast, free and
secure!">
</form>
```

The HTML shown above generates the following hyperlink. This example includes several optional fields.

https://www.paypal.com/xclick/business=seller@designerfotos.com&undefined_quantity=1&item_name=Baseball+Hat&item_number=123&amount=5.95&no_shipping=1&return=http://www.designerfotos.com/thankyou.htm&cancel_return=http://www.designerfotos.com/cancel.htm¤cy_code=USD

4

Multiple-Item Payment: Shopping Cart

With PayPal's Shopping Cart, your customers can buy multiple items with a single payment, browse your entire selection, and view a consolidated list of all their items before purchasing. The shopping cart comes in two basic forms:

1. A shopping cart hosted on the PayPal website, <https://www.paypal.com/>.
2. HTML input variables for use in third-party shopping carts.

The key distinction between the PayPal-hosted shopping cart and a third-party shopping cart is in the following HTML variables:

- **add** or **display**: these variables indicate the PayPal-hosted shopping cart.
- **upload**: this variable indicates that a third-party shopping cart is in use.

How the PayPal-Hosted Shopping Cart Works

This example shows how the shopping cart hosted by PayPal can work with the following features:

- Account Optional is turned off. In this example, to pay with PayPal, the customer must already have a PayPal account. For more information, see [“Account Optional or Website Payments Express” on page 30](#).
- Auto Return is turned on. At the end of the transaction, the customer's browser is automatically redirected back to your website. For more information, see [“Auto Return” on page 37](#).

How the PayPal-Hosted Shopping Cart Works

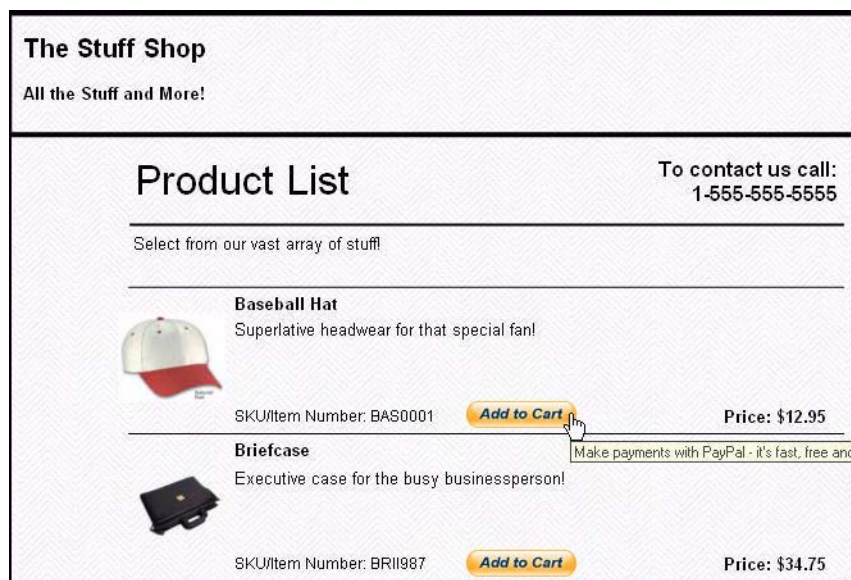
This example shows how the shopping cart hosted by PayPal can work with the following features:

- Account Optional is turned on. For more information, see [“Account Optional or Website Payments Express” on page 30](#).
- Auto Return is turned off. At the end of the transaction, the customer can click on the “Return to The Stuff Shop” button to return to your website. For more information, see [“Auto Return” on page 37](#).

What The Customer Sees

Bob, who has a PayPal account, is buying from The Stuff Shop. He selects a baseball hat by clicking **Add to Cart**.

FIGURE 4.1 PayPal-Hosted Shopping Cart Example: Add to Cart



The Stuff Shop is using a generic **Add to Cart** button created with the PayPal shopping cart button factory described in [“Button Factory for PayPal-Hosted Shopping Cart” on page 65](#). The HTML code for this button is detailed in [“Sample HTML for PayPal-Hosted Shopping Cart” on page 69](#).

Bob is taken to the PayPal website where enters his PayPal username and password and clicks Log In.

FIGURE 4.2 PayPal-Hosted Shopping Cart Example: On the PayPal Website

The Stuff Shop

1 Item, Subtotal with shipping: \$12.95

Pay Fast with PayPal

Why use PayPal?

- It's free to send money and shop online.
- You can shop without sharing your financial information with merchants.
- Over 50,000 online merchants accept PayPal.

Don't have a PayPal account?
No problem, [continue checkout](#).

LOG IN TO PAYPAL

Email:

Password:

[Log in](#)

[Forgot email address or password?](#)

Bob is taken to a review page showing the details of his payment.

FIGURE 4.3 PayPal-Hosted Shopping Cart Example: Review Page

The Stuff Shop

Review Your Payment

[PayPal](#) [Secure Payments](#)

* indicates required fields [Secure Transaction](#)

Item	Options	Quantity	Amount
Baseball Hat		1	\$12.95 USD
Subtotal:			\$12.95 USD
Shipping & Handling:			\$0.00 USD
Total Amount:			\$12.95 USD

[Pay \\$12.95 Now!](#)

Payment Method:  Mastercard [XXXX-5555] \$12.95 USD
[Change](#)

Shipping Address: 123 Anystreet
San Jose, CA 95123
United States
408-555-1234
[Change](#)

Contact Information: billybob@thornton.com
408-555-1234
[Change](#)

[Pay \\$12.95 Now!](#)

Because The Stuff Shop has not activated Profile-based shipping preferences, no shipping costs are added to the order. For information about automatic shipping calculation, see [“Automatic Calculation of Shipping and Handling Cost and Tax”](#) on page 39.

Multiple-Item Payment: Shopping Cart

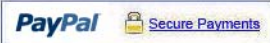
How the PayPal-Hosted Shopping Cart Works

Bob clicks **Pay \$12.95 Now!** to complete the payment. He is taken to a thank you page upon payment completion.

PayPal-Hosted Shopping Cart Example: Thank You Page After Payment

The Stuff Shop

Thank You for your payment.



Congratulations - your payment was sent. You have successfully paid for this transaction.
Order details have been sent to billybob@thornton.com. Your **confirmation number** is: ICN-718-121-9653.

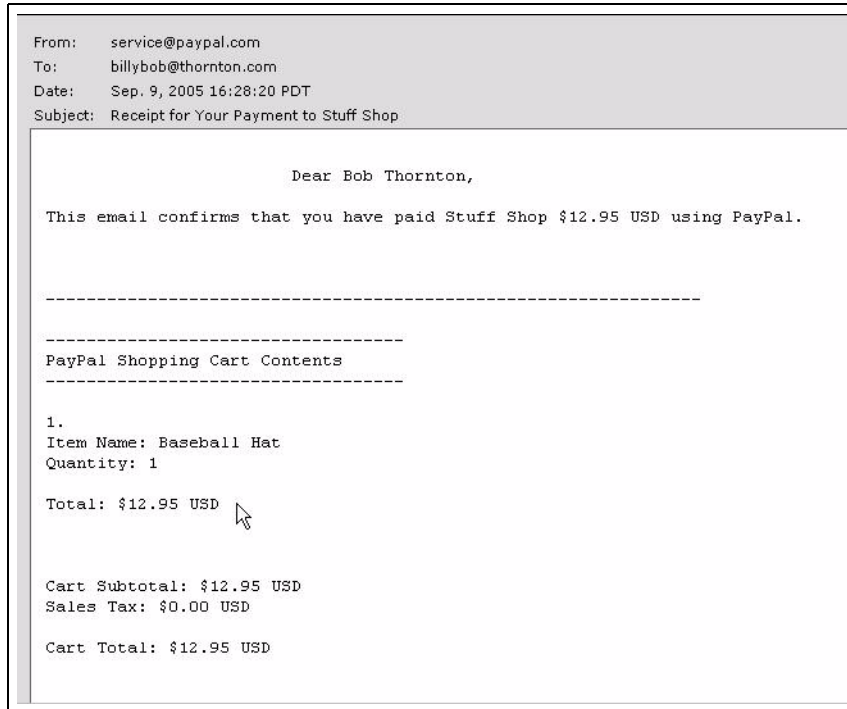
SHIPPING TO:	SENT BY:
123 Anystreet San Jose, CA 95123 United States	billybob@thornton.com 408-555-1234

Return to The Stuff Shop

[View Printable Receipt](#)

Bob receives an email receipt for this transaction that confirms the payment and payment details.

FIGURE 4.4 PayPal-Hosted Shopping Cart Example: Email Transaction Receipt



Button Factory for PayPal-Hosted Shopping Cart

With the PayPal-hosted shopping cart, customers can make a single payment for multiple items. With our shopping cart button factory, you can create a separate **Add to Cart** button for each item and put the automatically generated HTML code for that button on your website next to the item.

Use the following steps to create a shopping cart button, or if you are familiar HTML, you can use the variables in [Appendix A, “Website Payments Standard HTML Variables”](#) to code your own buttons.

1. Log in to your PayPal account at <https://www.paypal.com>.
2. Enter the following URL:
https://www.paypal.com/us/cgi-bin/webscr?cmd=_cart-factory
3. Enter the details for the item.
 - **Item Name/Service** (required): Enter the name of the item or service you wish to sell

Multiple-Item Payment: Shopping Cart

Button Factory for PayPal-Hosted Shopping Cart

- **Item ID/Number:** If you have an ID or tracking number for your item, enter it here. This field will be displayed to your customers at the time of payment, and will be shown in both the buyer's and seller's transaction details on the PayPal website
- **Item Price** (required): Enter the price of the item you wish to sell
- **Currency** (required): Choose the currency in which you would like this payment to be denominated. This field defaults to the currency of your primary balance.
- **Buyer's Country:** If you want the PayPal login or sign-up page to be displayed in a certain language, select a country from the pull-down menu where that language is spoken.

4. Choose an image for your button.

If you are going to be receiving payments from your website, choose the image for the button you would like your customers to click to make their purchase. To display your own image, enter the URL of the image's location in the URL field.

NOTE: All items added to a PayPal shopping cart must be denominated in a single currency, which is determined by the currency specified for the first item added to the Cart or by the `currency_code` variable. Once a buyer adds one item to a cart, the buyer is not allowed to add any items listed in other currencies to that cart. To change the currency, customers must purchase the items in the first currency or remove all items from the cart and add the items of the second currency. The best option is to list all of your items in the same currency.

Adding More Details to the Button

If you do not have additional details to add to your button (such as sales tax, shipping, or your logo), click **Create Button Now** and go to [“Copy and Paste the Shopping Cart HTML” on page 68](#). Otherwise, click **Add More Options**.

1. Calculate shipping and tax.

If you have specified shipping rates or tax calculations in your Profile, they are listed under **Shipping Cost Calculation** and **Sales Tax Calculation**. For more information, see [“Automatic Calculation of Shipping and Handling Cost and Tax” on page 39](#).

2. Add option fields to your button.

Creating an option field lets your customers specify information about their purchases. Option fields can specify information such as color, size, or gift wrapping. Options must not change the price of an item. A shopping cart button can have up to two option fields, and you can use a drop-down menu or a text box to collect the information.

- **Option Field Type:** Choose the type of option field: drop-down menu or text box. If you choose drop-down menu, you will enter the different choices. If you choose text box, your customer will enter his choice.
- **Option Name:** Enter the name of your option. There is a 60-character limit on option names.

- **Drop-Down Menu Choices:** If you are using a drop-down menu, enter your menu choices. There is a 30-character limit per choice, with a maximum of 10 choices. Use a carriage return (press **Enter**) to separate each choice.

3. Select a **View Cart** button.

Choose the button image you would like your customers to click when they check out and complete their purchases. To display your own image, enter the URL of the image's location in the URL field.

4. Customize your payment pages.

- **Custom Payment Page Style:** Give your customers a seamless payment experience by customizing PayPal's payment pages to match the style of your website. If you have already added Custom Payment Page Styles in your Profile, they will be listed here. Choose the page style you would like to appear when your customer clicks your Shopping Cart button. For more information about adding, selecting, or changing custom page styles, see [“Branding PayPal’s Payment Pages” on page 25.](#)”

5. Customize your customer's experience.

- **Successful Payment URL:** Enter the URL where you would like to send your customers after they have completed payment. Once customer has completes the payment, he sees a payment confirmation page. From this page, he will click Continue and return to the Successful Payment URL you have specified. If you do not enter a Successful Payment URL, customers who click this link will be taken to a PayPal web page.
- **Cancel Payment URL:** Enter the URL where you would like to send your customers if they cancel their payment at any point in the PayPal Shopping Cart payment flow. If you do not enter a Cancel Payment URL, customers who click this link will be taken to a PayPal web page.

6. Select other options.

- **Shipping Address:** If you would like your customers to be prompted to provide a shipping address, choose **Yes**. If you choose **No**, your customers will not be asked to provide a shipping address.

7. Collect additional information from your customers.

- **Note:** Select **Yes** if you would like your customers to be able to include a note to you with their payments. If you select **No**, your customers will not be given the opportunity to include a note.
- **Note Title:** You can choose a title for the note field. By including a title, you can prompt your buyers to enter specific information (like a User ID) or special instructions. If you do not enter a title, your customers will see the note field title **Optional Instructions**.

8. Choose the email address at which you want to receive payment.

If you have more than one confirmed email address attached to your PayPal account, you can specify the address at which you would like to receive your email payment notifications when your customers pay you.

Copy and Paste the Shopping Cart HTML

When you have finished filling out the PayPal Shopping Cart Button Factory form, click **Continue**.

- Copy the code from the **HTML for Websites** text box by highlighting all of the text and pressing **Ctrl+C**, or by highlighting all of the text, right-clicking your mouse, and choosing **Copy**.
- Open the web page file into which you'd like to add your Shopping Cart Button.
- Paste the code you just copied into your web page file wherever you would like the button to appear (typically, next to the description of the item or service) by either pressing **Ctrl+V** or by right-clicking on your mouse and selecting **Paste**.

HTML Tip: Ensure that the HTML code on your web page exactly matches the code you copy from PayPal. Some HTML editors might change some characters in the code. In addition, be sure that you paste the code into a field that accepts HTML. If you paste the code into a standard text field, the code is treated as displayable text.

Create Add to Cart buttons for all items.

Click **Create Another Button** to create more Add to Cart buttons the previous steps.

Copy the View Cart button HTML code.

Now that you have placed your Add to Cart buttons on your website, you need to include the "View Cart" buttons so your customers can quickly proceed to checkout when they are ready.

- Copy the code from the **Copy 'View Cart' button HTML** box by highlighting all of the text and pressing **Ctrl+C**, or by highlighting all of the text, right-clicking on your mouse, and choosing **Copy**.
- Open each web page from which you would like your customers to be able to get to their PayPal Shopping Carts.
- Paste the code you just copied into your web page file where you would like your "View Cart" button to appear, by either pressing **Ctrl+V** or by right-clicking your mouse and choosing **Paste**.

Sample HTML for PayPal-Hosted Shopping Cart

The following HTML is of a generic **Add to Cart** button created with the PayPal Shopping Cart button factory. Several optional fields are shown.

EXAMPLE 4.1 HTML for PayPal-Hosted Shopping Cart “Add to Cart” Button

IMPORTANT: You can change the values for any of the variables, with the exception of the first two lines.

```
<form target="paypal" action="https://www.paypal.com/cgi-bin/webscr"
method="post">
<!-- The PayPal-hosted shopping cart is specified with the command _cart --
>
<input type="hidden" name="cmd" value="_cart">
<input type="hidden" name="business" value="seller@designerfotos.com">
<!-- add the item to the PayPal-hosted shopping cart -->
<input type="hidden" name="add" value="1">
<input type="hidden" name="item_name" value="Baseball Hat">
<input type="hidden" name="item_number" value="12345">
<!-- No currency_code variable specified, so monetary amount is assumed to
be USD -->
<input type="hidden" name="amount" value="12.95">
<table>
  <tr>
    <td>
      <!-- allow customer to selection product option -->
      <input type="hidden" name="on0" value="Color?">Color?
      <select name="os0">
        <option value="Red">Red
        <option value="Green">Green
        <option value="Blue">Blue
      </select>
    </td>
  </tr>
</table>
<input type="image" src="https://www.paypal.com/images/x-click-but22.gif"
border="0" name="submit" alt="Make payments with PayPal - it's fast, free
and secure!">
</form>
```

Rather than creating a separate button for every single item you want to sell with the PayPal-hosted shopping cart, you can edit the HTML to create different **Add to Cart** buttons.

How A Third-Party Shopping Cart Works

This example shows how PayPal can work with a third-party shopping cart and with the following features:

- Account Optional is turned off. In this example, to pay with PayPal, the customer must already have a PayPal account. For more information, see [“Account Optional or Website Payments Express” on page 30.](#)
- Auto Return is enabled. At the end of the transaction, the customer’s browser is automatically redirected back to the merchant website. For more information, see [“Auto Return” on page 37.](#)

What The Customer Sees

Bob is buying photos from DesignerFotos. He selects several photos by clicking **Add to Cart**.

FIGURE 4.5 *Third-party Shopping Cart Example: Add to Cart*



In this example integration, the contents of the shopping cart are displayed each time an item is added to the cart.

FIGURE 4.6 Third-Party Shopping Cart Example: Proceed to Checkout

DesignerFotos [PayPal's sample integration] [View Cart](#) | [My Account](#) | [Help](#)
Search:

A demonstration of PayPal's Website Payments Standard flow [Demo Home](#)

Category
[Landscape](#)
[Abstract](#)
[Still Life](#)
[Featured](#)
[New Arrivals](#)
[On Sale](#)
[Join PhotoClub](#)
[Order Catalog](#)

Shopping Cart

Qty	Items	Price	
1	Pomeranian Puppy (32" x 32")	\$250.00	Delete
1	Orchid (32" x 32")	\$250.00	Delete
Update			
		Subtotal: \$500.00	
		Continue Shopping	Proceed to Checkout

After selecting all the items he wants, Bob clicks **Proceed to Checkout**.

Multiple-Item Payment: Shopping Cart

How A Third-Party Shopping Cart Works

Bob's browser is redirected to the PayPal website. If he had a PayPal account, he could enter his PayPal username and password and clicks **Log In** to access his saved information. Bob does not have a PayPal account, so he enters in his billing information and clicks Review Payment.

FIGURE 4.7 *Third-Party Shopping Cart Example: Entering Billing Information or Logging In*

The screenshot shows the PayPal checkout interface for 'DesignerFotos'. At the top, a summary bar indicates '2 Items, Subtotal with shipping: \$505.00'. Below this, the main heading is 'Create a PayPal Account'. To the right, there is a 'Payments by PayPal' logo. The form is divided into two main sections. The left section is for creating a new account, with fields for Country (United States), First Name, Last Name, Credit Card Number (starting with 40), Expiration Date (mm / yy), Billing Address Line 1 and 2, City, State (dropdown), Zip, Home Telephone, and Email Address. It also includes a checkbox for 'Want to save your information with PayPal?' and a 'Review Payment' button. The right section is for existing users, titled 'ALREADY HAVE A PAYPAL ACCOUNT?', with fields for Email and Password, a 'Log In' button, and a link for 'Forgot email address or password?'.

DesignerFotos [PayPal's sample integration]

2 Items, Subtotal with shipping: \$505.00

Create a PayPal Account

Payments by **PayPal**

Country: United States

First Name:

Last Name:

Credit Card Number: 40

Expiration Date: mm / yy CSC: What's this?

Billing Address Line 1:

Billing Address Line 2:

City:

State: Zip:

Home Telephone:

Email Address:

☐ Want to save your information with PayPal?

Review Payment

ALREADY HAVE A PAYPAL ACCOUNT?

Email:

Password:

Log In

Forgot [email address](#) or [password](#)?

Bob is taken to a review page showing the details of his payment.

FIGURE 4.8 Third-Party Shopping Cart Example: Review Page

DesignerFotos Payments by **PayPal**

Billing and Shipping **Review** Done

Review Your Payment

* indicates required fields Secure Transaction

Item	Options	Quantity	Amount
Orchid (32" x 32")		1	\$250.00 USD
Pomeranian Puppy (32" x 32")		1	\$250.00 USD
Subtotal:			\$500.00 USD
Shipping & Handling:			\$5.00 USD
Total Amount:			\$505.00 USD

Pay \$505.00 Now!

Payment Method: Mastercard [XXXX-5555] \$505.00 USD
[Change](#)

Shipping Address: 123 Anystreet
 San Jose, CA 95123
 United States
 408-555-1234
[Change](#)

Contact Information: billybob@thornton.com
 408-555-1234
[Change](#)

Pay \$505.00 Now!

Because DesignerFotos has activated Profile-based shipping preferences, the shipping costs are automatically added to the order. For information about automatic shipping calculation, see [“Automatic Calculation of Shipping and Handling Cost and Tax” on page 39](#).

Bob clicks **Pay \$505.00 Now!** to complete the payment.

Multiple-Item Payment: Shopping Cart

How A Third-Party Shopping Cart Works

Bob is taken to a thank you page.

Since Bob does not yet have a PayPal account, he can choose to open an account on this page by entering in his email address, selecting a password, and clicking on Sign Up.

FIGURE 4.9 Shopping Cart Example: Thank You Page After Payment

DesignerFotos [PayPal's sample integration]

Thank You for your payment.

Congratulations - your payment was sent. You have successfully paid for this transaction.
Order details have been sent to billybob@thornton.com. Your **confirmation number** is: ICN-718-121-9653.

SHIPPING TO:	SENT BY:
123 Anystreet San Jose, CA 95123 United States	billybob@thornton.com 408-555-1234

[Return to DesignerFotos](#)

[View Printable Receipt](#)

What are the benefits of creating a PayPal account?

- Never share credit card information
- Review order status whenever you want
- Send receive money online

Go on, create an account:

Email Address: billybob@thornton.com

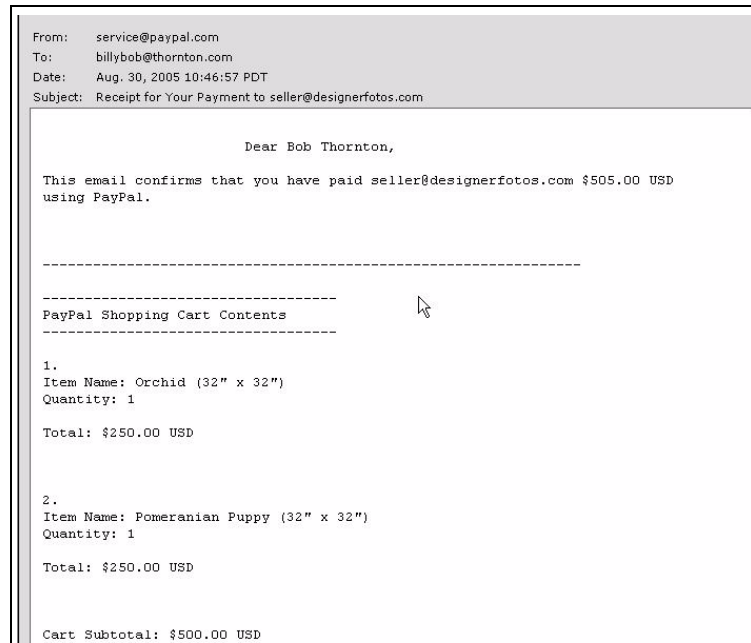
Create PayPal Password:
(8 characters minimum)

Confirm Password:

[Create Account](#)

Bob receives an email receipt for this transaction that confirms the payment and includes a copy of the payment details.

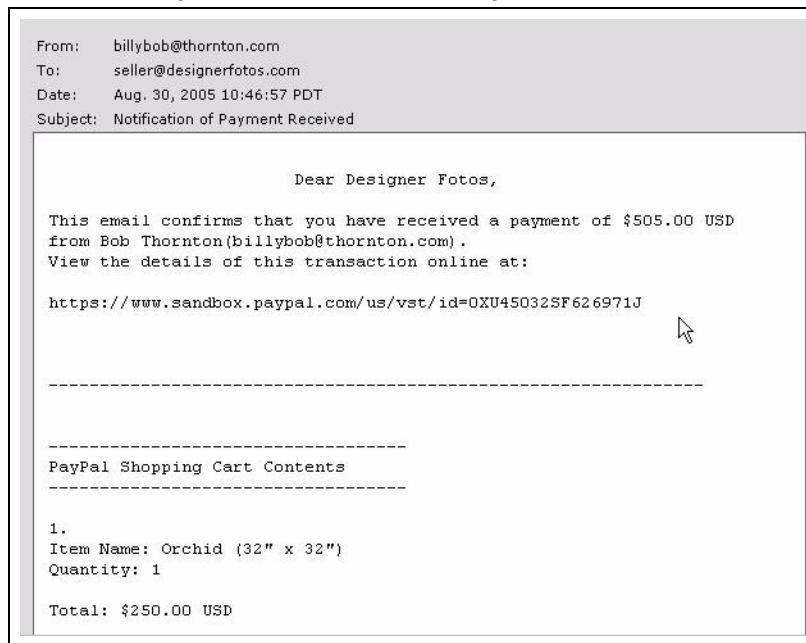
FIGURE 4.10 Example: Email Transaction Receipt



What You See

DesignerFotos receives an email notification of Bob's payment.

FIGURE 4.11 Example: Seller's Email Receipt



DesignerFotos (the user seller@designerfotos.com) can also see the payment in the PayPal account history.

Adding PayPal to Your Third-party Shopping Cart

Instead of relying on the PayPal-hosted Shopping Cart, some web developers want to integrate PayPal payment processing with their own third-party shopping cart. The details in this section allow your buyers to pay with PayPal when they are ready to check out after adding all of their items to your third-party shopping cart.

Required Third-Party Shopping Cart Variables

Your FORM requires at least the following hidden variables. For complete list of variables, see [Appendix A, "Website Payments Standard HTML Variables."](#)

TABLE 4.1 Required Third-Party Shopping Cart Variables

Name	Description
amount_1	Price of a single item or the total price of all items in the shopping cart

TABLE 4.1 Required Third-Party Shopping Cart Variables

Name	Description
business	Email address of your PayPal account
item_name_1	Name of the item or a name for the entire shopping cart
upload	Indicates the use of third-party shopping cart

There are two ways to integrate your third-party shopping cart with the PayPal payment flow:

- Pass the details of the individual items.
- Pass the aggregate amount of the total cart payment, rather than the individual item details.

Passing Individual Item Details to PayPal

If you can configure your third-party shopping cart to pass individual items to PayPal, the information about the items is included in the buyer's and seller's history transactions and notifications.

1. Set the cmd variable to `_cart`.
2. Include the `upload` variable:

```
<input type="hidden" name="upload" value="1">
```

3. Define item details for each item in the cart.

Specify the required variables and any optional variables listed in [Table A.1, "Allowed Values for cmd Variable."](#) Append `_x` to the variable name, where `x` is the item number, starting with 1 and increasing by one for each item added to the cart. The first item in the cart must be defined with variables ending in `_1`, like `item_name_1`, `amount_1`, and `quantity_1`; the second item with variables like `item_name_2`, `amount_2`, and `quantity_2`; the third item with variables like `item_name_3`, `amount_3`, and `quantity_3`; and so on.

IMPORTANT: The `_x` values must increment by one continuously in order to be recognized. If you skip from item #1 to item #3 without defining an item #2, the third item will be ignored.

The minimum required HTML for your post to PayPal looks similar to the following.

EXAMPLE 4.1 HTML for Passing Individual Item Detail to PayPal

```
<form action="https://www.paypal.com/cgi-bin/webscr" method="post">
<input type="hidden" name="cmd" value="_cart">
<input type="hidden" name="upload" value="1">
<input type="hidden" name="business" value="seller@designerfotos.com">
<input type="hidden" name="item_name_1" value="Item Name 1">
<input type="hidden" name="amount_1" value="1.00">
<input type="hidden" name="item_name_2" value="Item Name 2">
<input type="hidden" name="amount_2" value="2.00">
```

```
<input type="submit" value="PayPal">
</form>
```

Setting Currency in the Cart

All monetary variables (`amount_x`, `shipping_x`, `shipping2_x`, `handling_x`, `tax_x`, and `tax_cart`) are interpreted in the currency designated by the `currency_code` variable posted with the payment. Because `currency_code` is not item-specific, there is no need to append `_x` to the `currency_code` variable name. If no `currency_code` variable is posted, all monetary values default to U.S. Dollars.

Setting Tax on Individual Items

Use the `tax_x` variable to specify the tax for a particular item in the cart. For example, the following line specifies that the tax on item 2 in the cart is 15 cents:

```
<INPUT TYPE="hidden" name="tax_2" value=".15">
```

Setting the Tax for the Entire Cart

Use the `tax_cart` variable to specify a tax amount that applies to the entire purchase, rather than to individual items. The `tax_cart` variable overrides any per-item tax amount specified with `tax_x`.

Passing the Aggregate Shopping Cart Amount to PayPal

You can aggregate your entire shopping cart and pass the total amount to PayPal. You must post a single `item_name_1` for the entire cart and the total price of the cart's contents in `amount_1` as though it were a purchase of a single item.

NOTE: One drawback of this method is that your buyers will not see the individual items in their carts. In addition, you cannot change our variable names, nor can you add your own variable names.

The following HTML is identical to [“HTML for Passing Individual Item Detail to PayPal” on page 77](#) except the individual items' amounts and item names have been aggregated into a single item and amount.

EXAMPLE 4.2 HTML for Aggregate Cart Detail to PayPal

```
<form action="https://www.paypal.com/cgi-bin/webscr" method="post">
<input type="hidden" name="cmd" value="_cart">
<input type="hidden" name="upload" value="1">
<input type="hidden" name="business" value="seller@designerfotos.com">
<input type="hidden" name="item_name_1" value="Aggregated items">
<input type="hidden" name="amount_1" value="3.00">
<input type="submit" value="PayPal">
</form>
```

5

Using Authorization & Capture with Website Payments Standard

PayPal Authorization & Capture is a settlement solution that provides merchants increased flexibility in obtaining payments from their buyers. During a traditional sale at PayPal, the authorization and capture action is completed simultaneously. PayPal Authorization & Capture separates the authorization of payment from the capture of the authorized payment.

Authorization & Capture is for merchants who have a delayed order fulfillment process and who typically make a \$1 auth at checkout. It enables merchants to modify the original authorization amount due to order changes occurring after the initial order is placed (such as taxes, shipping, or item availability). This chapter discusses the authorization and capture process and provides steps to help you authorize, capture, reauthorize, and void funds.

There are two ways to use Authorization & Capture:

1. Create an order or authorization with Website Payments Standard HTML and capture or void the authorization on the PayPal website (<https://www.paypal.com/>).
2. Use the Authorization & Capture Application Programming Interface (API), which is not discussed in this book. For more information about the Authorization & Capture API, see the *Website Payments Pro Integration Guide*.

Basic Authorization Process

Authorization & Capture starts when your buyer authorizes a payment amount during checkout.

1. For example, you can send your buyer through the Website Payments payment flow, passing in the paymentaction variable set to authorization or order.
2. After your buyer completes checkout, you can then use the payment's transaction ID with Authorization & Capture in the PayPal website (<https://www.paypal.com/>). You can:
 - Capture either a partial amount or the full authorization amount.
 - Authorize a higher amount, up to 115% of the originally authorized amount (not to exceed an increase of \$75 USD).
 - Void a previous authorization.

Honor Period and Authorization Period

When your buyer approves an authorization, the buyer's balance can be placed on hold for a 29-day period to ensure the availability of the authorization amount for capture. You can reauthorize a transaction only once, up to 115% of the originally authorized amount (not to exceed an increase of \$75 USD).

After a successful reauthorization, PayPal honors 100% of authorized funds for three days. A day is defined as the start of the calendar day on which the authorization or reauthorization was made (from 12AM PST to 11:50PM PST).

You can settle without a reauthorization from day 4 to day 29 of the authorization period, but PayPal cannot ensure that 100% of the funds will be available after the three-day honor period. However, PayPal will not allow you to capture funds if the buyer's account is restricted, locked, or a fraudulent case occurs, or if your account has a high restriction level. You can use Authorization & Capture only when your account has a low restriction level.

The honor period and authorization period for authorizations is described below:

If you attempt to capture funds outside the honor period, PayPal applies best efforts to capture funds. However, there is a possibility that funds will not be available at that time.

Buyer and seller accounts cannot be closed if there is a pending (unsettled) authorization.

Supported PayPal Payment Products

You can use Authorization & Capture with the PayPal products listed in [Table 5.1, "PayPal Products Supporting Authorization & Capture."](#)

By default, these products assume that a transaction is a final sale. You must explicitly specify that a transaction is a basic or order authorization.

NOTE: You must capture and void orders and order authorizations using the Authorization & Capture APIs. That is, you cannot process order authorizations on the PayPal website (<https://www.paypal.com>). The PayPal website supports processing only basic authorizations, not order authorizations.

TABLE 5.1 *PayPal Products Supporting Authorization & Capture*

Product	Typical Usage
Website Payments	paymentaction="authorization"
Buy Now	paymentaction="authorization"
Donations	paymentaction="authorization"
Shopping carts	paymentaction="authorization"

Basic Authorization & Capture Scenarios

Included here are examples of some common scenarios you might encounter when implementing basic authorizations and captures.

Capturing A Single Authorization

If you have authorized a transaction, you need to capture the funds in order to receive payment.

NOTE: PayPal recommends that you capture payments within three days of the original authorization.

To initiate a capture:

1. Go to the History of your account on <https://www.paypal.com>.
2. Click the Capture button associated with the transaction.
3. Review the information on the Capture Funds page, input the amount to capture, and then click Capture Funds.

The funds are transferred to your account.

Batch Capturing Multiple Authorizations

On <https://www.paypal.com>, you can initiate the capture an entire group of authorized transactions at the same time. This feature is known as batch capture.

To capture a batch of authorized transactions:

1. Go to the History of your account on <https://www.paypal.com>.
2. Click the Capture button associated with any transaction.

Recent Activity All Activity									
Your Recent Activity displays the last day of account activity.									
File	Type	To/From	Name/Email/Phone	Date	Status	Details	Action	Amount (\$)	Fee
☐	Authorization	From	Joseph Evans	Aug. 27, 2010	Pending	Details	Capture	\$10.00 USD	...
☐	Authorization	From	Joseph Evans	Aug. 27, 2010	Pending	Details	Capt	10.00 USD	...

Using Authorization & Capture with Website Payments Standard

Basic Authorization & Capture Scenarios

- On the displayed page, click Batch Capture in the introductory paragraph.

Capture Funds

Enter the capture details below to move funds from your buyer's account to your account. To capture multiple transactions at once, use [Batch Capture](#) tool.

Authorization ID: 86705136G28309319

- On the displayed page, either use the pull-down menu to choose a defined date or date range, or enter a specific date range in the provided fields.

Batch Capture

Specify a date range and click Search to view transactions that can be captured. View your completed captures in [Batch Capture Reports](#).

Show Transactions: ☐ Period: Show All

☒ From: Month / Day / Year To: Month / Day / Year Search

- On the displayed page, check the authorizations you want to capture, set their capture amount, choose whether you will make an additional capture later, and optionally enter a note to the buyer.

Pending Authorizations from Aug. 27, 2010 to Aug. 27, 2010						
☒	Date	Authorization ID / Buyer Name	Authorization Amount Remaining	Capture Amount	Additional capture	Note to Buyer
☒	Aug. 27, 2010	86705136G28309319 Joseph Evans	\$10.00 USD	8.25	Yes	
☒	Aug. 27, 2010	8LJ552685A333620B Joseph Evans	\$10.00 USD	10.00	Yes No	
☒	Aug. 27, 2010	6UG76354LN348310V Joseph Evans	\$10.00 USD	10.00	No	
☒	Aug. 27, 2010	1WT84122XW187811S Joseph Evans	\$10.00 USD	10.00	No	
☒	Aug. 27, 2010	0MG93653R9520720D Joseph Evans	\$10.00 USD	10.00	No	
☒	Aug. 27, 2010	3WP42389AH094101E Joseph Evans	\$10.00 USD	10.00	No	
check all - clear all						

- Review the capture transactions, make any desired changes, and submit them for processing.

Voiding an Authorization

If you initiated an authorization, and now want to refund the customer, you need to void the authorization. Once you void an authorization, you cannot capture any funds associated with the authorization, and the funds are returned to the customer.

NOTE: Voiding an authorization cancels the entire open amount.

You can initiate a void in the following cases:

- the authorization is pending
- the authorized amount was captured at less than 100%

To void an authorization:

1. Click on the Void button associated with the authorization.
2. Confirm the void details on the Void Authorization page, and then click Void.

NOTE: PayPal recommends that you explain any unique circumstances to your buyer in the Note field.

PayPal sends your customer an email with the details of the void.

Capture Within 3 Days

1. Your buyer orders a camera from your website.
2. Your buyer enters payment information and authorizes payment.
3. Send your buyer to PayPal using a hosted flow, specifying the variable `paymentaction=authorization`
4. PayPal initiates the authorization.
5. On day 3, you ship the camera and capture funds.

After you have captured funds, your Transaction Details shows the transaction with a Completed status.

FIGURE 5.1 Transaction Details: Completed Transaction

[Log Out](#) | [PayPal Home](#) | [Help](#) | [Security Center](#)

PayPal

[My Account](#) | [Send Money](#) | [Request Money](#) | [Merchant Services](#) | [Auction Tools](#) | [Products](#)

[Overview](#) | [Add Funds](#) | [Withdraw](#) | **History** | [Resolution Center](#) | [Profile](#)

Transaction Details

Web Accept Payment Received (ID # 6P775734WM9600006)

Original Authorization

Date	Type	Status	Details	Gross	Fee	Net
Aug. 1, 2011	Authorization From bus	Completed	Details	\$100.00 USD	...	...

Related Transaction

Date	Type	Status	Details	Gross	Fee	Net
Aug. 3, 2011	Payment From bus	Completed	...	\$100.00 USD	-\$3.20 USD	\$96.80 USD

Total Funds Captured: \$100.00 USD

Capture From 4 - 29 Days

1. Your buyer orders a DVD player from your website.
2. Send your buyer to PayPal using a hosted flow, specifying the variable `paymentaction=authorization`.
3. Your buyer enters payment information and authorizes payment.
4. PayPal initiates the authorization.
5. The DVD player is discontinued. You order a different DVD player from your vendor and notify your buyer of the change.
6. On day 14, the DVD player arrives from your vendor. Because the honor period has passed, you complete a reauthorization for payment. You ship the DVD player and complete the final capture.

Your Transaction Details shows that the transaction has been completed.

FIGURE 5.2 Transaction Details: Reauthorization, Final Capture

The screenshot shows the PayPal 'Transaction Details' page for a 'Web Accept Payment Received' transaction (ID # 26S82076L4851981N). The page includes a navigation bar with links like 'Log Out', 'PayPal Home', 'Help', and 'Security Center'. Below the navigation bar, there are tabs for 'My Account', 'Send Money', 'Request Money', 'Merchant Services', 'Auction Tools', and 'Products'. Under 'My Account', there are sub-tabs: 'Overview', 'Add Funds', 'Withdraw', 'History', 'Resolution Center', and 'Profile'. The 'History' tab is selected, showing the 'Transaction Details' for the specified transaction.

Original Authorization						
Date	Type	Status	Details	Gross	Fee	Net
Jul. 19, 2011	Authorization From bus	Completed	Details	\$100.00 USD	...	...

Related Transactions						
Date	Type	Status	Details	Gross	Fee	Net
Aug. 1, 2011	Reauthorization From bus	Completed	Details	\$75.00 USD	...	...
Aug. 1, 2011	Payment From bus	Completed	...	\$75.00 USD	-\$2.48 USD	\$72.52 USD

Total Funds Captured: \$0.00 USD

One Authorization, Multiple Captures, and a Refund

1. Your buyer orders two textbooks and a keyboard from your website.
2. Your buyer enters payment information and authorizes payment.
3. Send your buyer to PayPal using a hosted flow, specifying the variable `paymentaction=authorization`.
4. PayPal initiates the authorization.
5. One textbook and the keyboard are out of stock. You order additional inventory from your vendors. You ship the in-stock textbook and capture the first partial capture on day 6.
6. You receive the second textbook from the vendor. You ship the textbook and capture the second partial capture on day 11.
7. You receive the keyboard from the vendor. You reauthorize for payment on day 19.
8. Your buyer files a complaint that the textbook from the first shipment is damaged. You issue a partial refund for the first capture.

Your Transaction Details shows the following:

FIGURE 5.3 Transaction Details: Partial Capture, Reauthorization, Refund

[Log Out](#) | [PayPal Home](#) | [Help](#) | [Security Center](#)

PayPal

[My Account](#) | [Send Money](#) | [Request Money](#) | [Merchant Services](#) | [Auction Tools](#) | [Products & Services](#)

[Overview](#) | [Add Funds](#) | [Withdraw](#) | **[History](#)** | [Resolution Center](#) | [Profile](#)

Transaction Details

Authorization (ID # 48W34161GT1537504)

Original Authorization

Date	Type	Status	Details	Gross	Fee	Net
Jan. 21, 2012	Authorization From bus	Pending	...	\$100.00 USD	...	...

Related Transactions

Date	Type	Status	Details	Gross	Fee	Net
Jan. 26, 2012	Payment From bus	Completed	Details	\$25.50 USD	-\$1.04 USD	\$24.46 USD
Jan. 31, 2012	Payment From bus	Completed	Details	\$15.75 USD	-\$0.76 USD	\$14.99 USD
Feb. 8, 2012	Reauthorization From bus	Pending	Details	\$55.25 USD	...	...
Feb. 8, 2012	Payment From bus	Refunded	Details	\$25.25 USD	-\$1.03 USD	\$24.22 USD
Feb. 8, 2012	Refund To bus	Completed	Details	-\$20.00 USD	\$0.58 USD	-\$19.42 USD

Total Funds Captured: \$41.25 USD

Lower Capture Amount

1. Your buyer orders a laser printer and a USB cable from your website.
2. Your buyer enters payment information and authorizes payment.
3. Send your buyer to PayPal using a hosted flow, specifying the variable `paymentaction=authorization`.
4. PayPal initiates the authorization.
5. Before you process the transaction, your buyer contacts you and requests to cancel the USB cable from the order.
6. On day 6, you ship the laser printer and complete a partial capture for an amount less than the original authorization amount.
7. You complete a void on the funds remaining on the authorization.

Your Transaction Details shows the following:

FIGURE 5.4 Transaction Details: Partial Capture, Voided Transaction

The screenshot shows the PayPal 'Transaction Details' page. At the top, there are links for 'Log Out', 'PayPal Home', 'Help', and 'Security Center'. Below these are tabs for 'My Account', 'Send Money', 'Request Money', 'Merchant Services', 'Auction Tools', and 'Products & Services'. Under 'My Account', there are sub-tabs: 'Overview', 'Add Funds', 'Withdraw', 'History' (which is selected), 'Resolution Center', and 'Profile'.

The main section is titled 'Transaction Details' and shows 'Web Accept Payment Received (ID # 5G110511NP137493W)'. It lists the 'Original Authorization' with a table of transaction details.

Date	Type	Status	Details	Gross	Fee	Net
Feb. 19, 2011	Authorization From bus	Voided	Details	\$100.00 USD	...	...

Below this is a 'Related Transaction' table:

Date	Type	Status	Details	Gross	Fee	Net
Feb. 24, 2011	Payment From bus	Completed	...	\$75.00 USD	-\$2.48 USD	\$72.52 USD

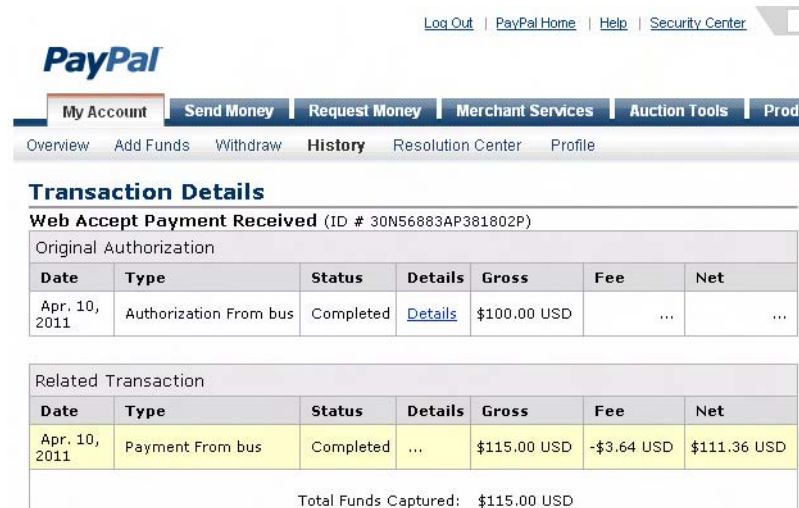
At the bottom, it states 'Total Funds Captured: \$75.00 USD'.

Capture Up to 115%

1. Your buyer places an order from your website.
2. Your buyer enters payment information and authorizes payment.
3. Send your buyer to PayPal using a hosted flow, specifying the variable `paymentaction=authorization`.
4. PayPal initiates the authorization.
5. You add shipping charges to the order and capture funds on day 1.

Your Transaction Details shows the completed transaction. The capture results in a total not greater than 115% of the original authorization.

FIGURE 5.5 Transaction Details: Capture up to 115%



The screenshot shows the PayPal 'Transaction Details' page. At the top, there are links for 'Log Out', 'PayPal Home', 'Help', and 'Security Center'. Below the PayPal logo is a navigation bar with tabs: 'My Account', 'Send Money', 'Request Money', 'Merchant Services', 'Auction Tools', and 'Products'. Under 'My Account', there are sub-tabs: 'Overview', 'Add Funds', 'Withdraw', 'History', 'Resolution Center', and 'Profile'. The main heading is 'Transaction Details'. Below it, the transaction is identified as 'Web Accept Payment Received (ID # 30N56883AP381802P)'. The first section, 'Original Authorization', contains a table with one row: Apr. 10, 2011, Authorization From bus, Completed, with a link to 'Details', a gross amount of \$100.00 USD, and no fee. The second section, 'Related Transaction', contains a table with one row: Apr. 10, 2011, Payment From bus, Completed, with a gross amount of \$115.00 USD, a fee of -\$3.64 USD, and a net amount of \$111.36 USD. At the bottom, it states 'Total Funds Captured: \$115.00 USD'.

Original Authorization						
Date	Type	Status	Details	Gross	Fee	Net
Apr. 10, 2011	Authorization From bus	Completed	Details	\$100.00 USD	...	...

Related Transaction						
Date	Type	Status	Details	Gross	Fee	Net
Apr. 10, 2011	Payment From bus	Completed	...	\$115.00 USD	-\$3.64 USD	\$111.36 USD

Total Funds Captured: \$115.00 USD

Authorization Expires

1. Your buyer orders a desktop computer from your website.
2. Your buyer enters payment information and authorizes payment.
3. Send your buyer to PayPal using a hosted flow, specifying the variable `paymentaction=authorization`.
4. PayPal initiates the authorization.
5. Before you process the transaction, your buyer contacts you to cancel the order.
6. You do not capture funds for the transaction.
7. The authorization expires.

Your Transaction Details shows the authorization with an Expired status.

FIGURE 5.6 Transaction Details: Expired Authorization

The screenshot shows the PayPal user interface. At the top, there are links for Log Out, PayPal Home, Help, and Security Center, along with a search bar. Below this is the PayPal logo and a navigation bar with tabs: My Account, Send Money, Request Money, Merchant Services, Auction Tools, and Products & Services. Under the My Account tab, there are sub-links: Overview, Add Funds, Withdraw, History, Resolution Center, and Profile. The main heading is "Transaction Details". Below this, it says "Web Accept Payment Received (ID # 9C144809Y43476015)" and "Original Authorization". A table displays the transaction details:

Date	Type	Status	Details	Gross	Fee	Net
Mar. 3, 2010	Authorization From Nguyen Cleaners	Expired	Details	\$100.00 USD	\$0.00 USD	\$100.00 USD

Void

1. Your buyer orders a stereo system from your website.
2. Your buyer enters payment information and authorizes payment.
3. Send your buyer to PayPal using a hosted flow, specifying the variable `paymentaction=authorization`.
4. PayPal initiates the authorization.
5. Before you process the transaction, your buyer contacts you to cancel the order.
6. You void the transaction.

Your History shows the transaction with a Voided status.

FIGURE 5.7 History: Voided Transaction

The screenshot shows the PayPal 'History' page. At the top, there's a navigation bar with links like 'Log Out', 'PayPal Home', 'Help', and 'Security Center'. Below this is a main menu with 'My Account' selected, and sub-menus for 'Send Money', 'Request Money', 'Merchant Services', 'Auction Tools', and 'Products & Services'. Under 'My Account', there are links for 'Overview', 'Add Funds', 'Withdraw', 'History' (which is active), 'Resolution Center', and 'Profile'.

The 'History' section has a sub-header 'History' and a box for 'Monthly Account Statements' with a button 'Get Monthly Account Statements'. To the right, there's a 'Reporting Tools' section with links for 'Download My History' and 'Merchant Sales Report', and a 'Learn More' section with links for 'Advanced Search' and 'Transaction Disputes'.

Below these, there's a search bar with the text 'Search - Search your Account History and see results below'. It includes a 'Show:' dropdown set to 'All Activity - Advanced View', an 'in:' dropdown set to 'All Currencies', a 'Within:' dropdown set to 'The Past Day', and a date range selector for 'From' (01 / 28 / 2005) and 'To' (02 / 27 / 2005). A 'Search' button is at the bottom right of the search area.

The search results are displayed in a table titled 'All Activity - Advanced View from Jan. 28, 2005 to Feb. 27, 2005'. The table has columns: Date, Type, To/From, Name/Email, Status, Details, Action, Gross, Fee, Net Amount, and Balance.

Date	Type	To/From	Name/Email	Status	Details	Action	Gross	Fee	Net Amount	Balance
Feb. 27, 2005	Authorization	From	Nguyen Cleaners	Voided	Details		\$10.00 USD	\$0.00 USD	\$10.00 USD	\$292.82 USD

Reattempted Capture

1. Your buyer orders two sweatshirts from your website.
2. Your buyer enters payment information and authorizes payment.
3. Send your buyer to PayPal using a hosted flow, specifying the variable `paymentaction=authorization`.
4. PayPal initiates the authorization.

- On day 3, you attempt to capture funds, but the capture fails. You receive an error message similar to the following:

FIGURE 5.8 A Capture Error

Log Out | PayPal Home | Help | Security Center

PayPal

My Account | Send Money | Request Money | Merchant Services | Auction Tools | Products

Overview | Add Funds | Withdraw | **History** | Resolution Center | Profile

We are sorry, we cannot process this settlement at this time.

Capture Funds
Enter the capture details below.

Authorization ID: 7KN421336L156840R
Name: Hachigoro Bayul
Email: qa76-usbuser1_buyer1_bal@paypal.com

Authorization Amount: \$75.00 USD
Capture Amount:

Additional Capture Possible: ☐ Yes (option to capture additional funds on this authorization if needed)
☒ No (no additional capture needed; close authorization after this capture)

Note to merchant: Your buyer Hachigoro Bayul authorized a payment of \$75.00 USD. If you capture an amount different than this, you should notify your buyer of this change.

PayPal strongly recommends that you explain any unique circumstances (e.g. multiple captures, changes in item availability) to your buyer in detail below. Your buyer will see this note in their Transaction Details and in an email notification from PayPal.

Note to Buyer: (Optional)

255 characters left

- There was a restriction on the buyer's account. You contact the buyer to resolve the problem.
- Your buyer resolves the account problem.
- You reattempt and successfully capture funds. You ship the order to your buyer.

NOTE: The reauthorization scenario is similar to the Reattempted Capture scenario as detailed above.

Recommendations for Best Use of Authorization & Capture

Here are recommendations to ensure the best buying experience for your customers and getting the most from Authorization & Capture.

Capturing Funds on Basic Authorizations

PayPal recommends that you capture funds within the honor period of three days because PayPal will honor the funds for a 3-day period after the basic authorization. If you attempt to capture funds after the three-day period and the authorization fails, your request to capture funds may be declined.

After day 4 of the authorization period, you can initiate a reauthorization, which will start a new three-day honor period. However, it will not extend the original authorization period past 29 days. For example, if you successfully complete a reauthorization on day 29 of the authorization period, funds will only be honored until the end of the 29th day, and a new three-day honor period will start but not extend beyond day 29.

You should capture funds within 24 hours after you ship your buyer's order.

Buyer Approval for Basic Authorizations

A buyer-initiated authorization allows you to capture funds from the buyer's account up to 115% of the originally authorized amount (not to exceed an increase of \$75 USD) and up to \$10,000 USD.

IMPORTANT: If you want to update any details of the purchase that change the original authorization amount, PayPal requires that you obtain consent from the buyer at the time of purchase or at the time of capture.

Voiding Basic Authorizations

You should void an authorization if the authorization or reauthorization will not be used.

Voiding the authorization unlocks the temporary hold placed on your buyer's funding sources.

6

Issuing Refunds

When you issue a refund, the gross amount of the refund is sent to your customer. The gross amount equals the net amount of the original transaction plus the refunded fee from PayPal.

Gross Amount = Net Amount + Refunded Fee

Refunding Within 60 Days of Payment

You can refund the entire amount of a transaction or portions of it. If you issue a refund within 60 days, the original transaction fee for receiving the payment is credited to your account. For partial refunds, you are credited a percentage of the original transaction fee based on the refunded amount.

To issue a refund within 60 days:

1. Log in to your PayPal account.
2. Click the **History** subtab.
3. Find the payment transaction you want to refund.
4. Click the **Details** link for the transaction.
5. Click the **Refund Payment** link on the **Transaction Details** page.
6. Enter the refund amount and click **Submit**.
7. Confirm the refund amount and click **Process Refund**.

If you refund a pending eCheck payment, no fees are charged because the pending payment is effectively canceled.

Refunding After 60 Days

When you issue a refund after 60 days, your original transaction fee for receiving the payment is not credited to your account.

To issue a refund after 60 days:

1. Log in to your PayPal account.
2. Click the **Send Money** tab.
3. Enter the required information.

4. Click **Continue**.
5. Review the information on the confirmation page, and click **Send Money** to complete the refund.

7

Encrypted Website Payments

To add security to online payments, you can create Encrypted Website Payment (EWP) button code that relies on standard public key encryption. With public and private keys, you can dynamically encrypt payment information before sending it to PayPal.

Encrypted Website Payments works in the following way.

TABLE 7.1 How Encrypted Website Payments Work

Merchant	Customer	PayPal
Creates a public key and uploads it to PayPal. Downloads PayPal's public certificate.		
Creates HTML name/value pairs that represent the parameters of the HTML FORM to post to PayPal when a customer clicks a button on his website		
Encrypts the button parameters with PayPal's public key, and signs the encrypted data with his own private key		
Publishes the signed, encrypted FORM to his website with a "Pay" button	Clicks "Pay" button, which posts the signed, encrypted FORM data to PayPal's URL	Checks the authenticity of the data by using the merchant's uploaded public key
		Decrypts the data with PayPal's private key
		Directs the buyer's browser to the PayPal payment flow specified in the button parameters

Prerequisites to Using EWP

This section describes how to create your private and public keys for EWP, upload your public key to PayPal, and download a copy of PayPal's public key:

- Generate a private key
- Generate a public certificate
- Upload your public certificate to the PayPal website at https://www.paypal.com/us/cgi-bin/webscr?cmd=_profile-website-cert

- Download PayPal's public certificate from https://www.paypal.com/us/cgi-bin/webscr?cmd=_profile-website-cert

Public Key Encryption Background

Public key encryption (asymmetric encryption) improves security and convenience by allowing senders and receivers to have separate public and private encryption keys:

- **The public key:** The public key is the portion of an asymmetric cryptographic key that receivers give senders who want to send them encrypted information. I
- **The private key:** The private key is the portion of an asymmetric cryptographic key receivers keep secret and do not send to anyone. The public certificate: The public certificate consists of the public key and identity information, such as a person's name, which could be signed by a certificate authority (CA). The CA guarantees that the public key belongs to the named entity.
- **The encryption process:** Sender use both their private key and the receivers' public key to encrypt the information. Receiver use their private key and the senders' public key to decrypt the information that was encrypted. This encryption process is also used with digital signatures to verify the origin of the information.

Setting Up The Certificates

For EWP, PayPal requires that you upload your public certificate to its website so that the authenticity of the encrypted code can be verified.

PayPal accepts only X.509 public certificates, not public keys. The difference between a key and a certificate is that a certificate includes the public key along with information about the key, such as when the key expires and who the key belongs to. PayPal accepts public certificates in OpenSSL PEM format from any established certificate authority, such as VeriSign.

You can also create your own private key and public certificate using open source software such as OpenSSL (<http://www.openssl.org>), which is detailed in the following section.

Creating Your Private Key Using OpenSSL

Using the openssl program, enter the following command to create your private key. The command generates a 1024-bit RSA private key that is stored in the file `my-prvkey.pem`:

```
openssl genrsa -out my-prvkey.pem 1024
```

Creating Your Public Certificate Using OpenSSL

The public certificate must be in PEM format. To create your certificate, enter the following `openssl` command, which generates a public certificate in the file `my-pubcert.pem`:

```
openssl req -new -key my-prvkey.pem -x509 -days 365 -out my-pubcert.pem
```

Uploading Your Public Certificate

To upload your public certificates to the PayPal website:

1. Log in to your Business or Premier PayPal account.
2. Click the **Profile** subtab.
3. In the Seller Preferences column, click **Encrypted Payment Settings**.
4. Click **Add**.
5. Click Browse, and select the public certificate you want to upload.

When your public certificate is successfully uploaded, it appears on the next screen under **Your Public Certificates**.

FIGURE 7.1 Upload Public Certificate for EWP

Your Public Certificates

PayPal will use your public certificate to decipher the encrypted content of your website buttons. You may add up to 6 different certificates.

	Cert ID	Certifying Authority	Expiration Date
	PUFXE42P9XNNG	/C=US/ST=CA/L=Chino/O=DesignerFotos/OU=Legal Dept./CN=D. Williams/emailAddress=seller@designerfotos.com	Aug. 17, 2006 00:40:02 PDT
	Download	Remove	Add

NOTE: After you successfully upload your certificate, PayPal assigns a corresponding certificate ID. Store the certificate ID in a safe place. You need it to make Encrypted Website Payments.

Downloading PayPal's Public Certificate

To download PayPal's public certificate:

1. Log in to your Business or Premier PayPal account.
2. Click the **Profile** subtab.
3. In the Seller Preferences column, click **Encrypted Payment Settings**.
4. Under the **PayPal Public Certificate** section, click **Download**.

FIGURE 7.2 Download PayPal's Public Certificate for EWP

PayPal Public Certificate

PayPal requires that you use the PayPal Public Certificate with your code to encrypt buttons so that only PayPal can decipher the encrypted contents. Click the **Download** button below to download the PayPal Public Certificate.



Removing Your Public Certificate

NOTE: If you remove your public certificate, its associated certificate ID is no longer valid for encrypting buttons, and any buttons generated by your website with that certificate ID will not function correctly.

To remove one or more of your public certificates:

1. Log in to your Business or Premier PayPal account.
2. Click the **Profile** subtab.
3. In the Seller Preferences column, click **Encrypted Payment Settings**.
4. Select one of the listed certificates, and click **Remove**.
5. On the next screen, click **Remove** again to remove the selected public certificate.

Encrypting Your HTML

PayPal provides Java and Microsoft Windows software to encrypt your Website Payments Standard HTML FORM variables. Download a program from the following location:

<https://www.paypal.com/us/cgi-bin/webscr?cmd=p/xcl/rec/ewp-code>

After you download and extract the software, copy your private key, public certificate, p12 file and PayPal's public certificate to the folder where the software is located.

1. Prepare an input file of Website Payments Standard variables and values for each encrypted button you want to create. Each variable and value must be on its own separate line, as in the following example.

NOTE: The `cert_id` variable identifies the public certificate you uploaded to PayPal's website.

```
cert_id=Z24MFU6DSHBXQ
cmd=_xclick
business=sales@company.com
item_name=Handheld Computer
item_number=1234
custom=sc-id-789
```

```

amount=500.00
currency_code=USD
tax=41.25
shipping=20.00
address_override=1
address1=123 Main St
city=Austin
state=TX
zip=94085
country=US
no_note=1
cancel_return=http://www.company.com/cancel.htm

```

2. Run the encryption program. with the appropriate syntax shown in [Table 7.2, “Command Line Syntax for PayPal Encrypted Website Payments Software.”](#)
3. Copy the encrypted code to your website.

TABLE 7.2 Command Line Syntax for PayPal Encrypted Website Payments Software

Software	Command Line
Java	java ButtonEncryption CertFile PKCS12File PPCertFile Password InputFile OutputFile [Sandbox]
Microsoft Windows	PPEncrypt CertFile PrivKeyFile PPCertFile InputFile OutputFile [Sandbox]

where:

TABLE 7.3 Description of Arguments for EWP Commands

Argument	Description
CertFile	is the pathname to your own public certificate.
PKCS12File	is the pathname to the PKCS12-format of your own public certificate.
PPCertFile	is the pathname to a copy of PayPal’s public certificate.
Password	is the passphrase to the PKCS12-format of your own public certificate.
InputFile	is the pathname to file containing the unencrypted Website Payments HTML FORM variables.
OutputFile	a file name for the encrypted output.
[Sandbox]	is the optional word Sandbox if you are creating EWP code for testing in the PayPal Sandbox.

Blocking Unencrypted Website Payments

To prevent someone from creating a “spoof” version of your Website Payment buttons, you can block unencrypted website payments.

To allow only Encrypted Website Payments:

1. Log in to your Business or Premier PayPal account.
2. Click the Profile subtab.
3. Click the Website Payment Preferences link in the right-hand menu.
4. Select On next to Block Non-encrypted Website Payments.

8

Testing in the PayPal Sandbox

The PayPal Sandbox can be used to test the following functionality.

IMPORTANT: The Sandbox does not process real money.

- **Buy Now and Donations:** Test single-item payments. For more information, see [Chapter 3, “Single-Item Payment: Buy Now and Donations.”](#)
- **Shopping Carts:** Test the purchase of multiple items in a single transaction and making a single payment. For more information, see [Chapter 4, “Multiple-Item Payment: Shopping Cart.”](#)
- **Subscriptions:** Create and publish test/prototype webpages and other content to which only paying members will have access. For more information, see the [Subscriptions and Recurring Payments Guide](#).
- **Refunds:** Test providing a refund of money paid by a PayPal user in a transaction.
- **Simulated transactions:** Test scenarios such as successful and failed eChecks.

To test in the Sandbox, you must first create a Developer Central account. With this account, you can create multiple PayPal accounts, such as seller and buyer accounts, to simulate different scenarios.

For complete details about using Developer Central and the Sandbox, see the [Sandbox User Guide](#).

9

Website Payments Standard HTML FORM Basics

This chapter describes the basic functionality of Website Payments Standard HTML FORMs in technical terms.

Your customers interface with Website Payments Standard through hidden HTML FORM input variables on your website. These FORMs submit variables and their values to PayPal. You set these variables to produce the desired effect. Depending on the values of the variables, you can invoke PayPal's shopping cart, Buy Now, or Donations and activate or invoke various PayPal features.

There is a wide variety of HTML creation tools for you to choose from. This guide does not describe all the possibilities. PayPal offers "button factories" that walk you through the process of creating HTML for Buy Now or Donations buttons and Shopping Cart buttons. For more information about these button factories, see [Chapter 3, "Single-Item Payment: Buy Now and Donations"](#) and [Chapter 4, "Multiple-Item Payment: Shopping Cart"](#).

FORM Attributes: ACTION and METHOD

The FORM tag includes two required attributes, ACTION and METHOD, and always looks like this:

```
<FORM ACTION="https://www.paypal.com/cgi-bin/webscr" METHOD=POST>
```

IMPORTANT: Do not change these values. These attributes are required for any PayPal Shopping Cart, Buy Now, or Donations button.

Hidden Input Variables

HTML input variables in a PayPal Website Payments Standard FORM are always hidden from the customer's view. They have the following general format:

```
<INPUT TYPE="hidden" name="variableName" value="allowedValue">
```

The *variableName* is any of the variables described in [Appendix A, "Website Payments Standard HTML Variables,"](#) and the *allowedValue* is any of the values detailed for those variables.

Specifying the Website Payments Standard Product: cmd

The cmd variable is always required in a FORM. Its value determines which Website Payments Standard product you are using to obtain payment from the customer:

TABLE 9.1 Allowed Values for cmd Variable

Value of cmd	Description
_xclick	A Buy Now or Donations button
_cart	A shopping cart

The input tag looks like one of the following:

- Buy Now or Donations: `<INPUT TYPE="hidden" name="cmd" value="_xclick">`
- Shopping Cart: `<INPUT TYPE="hidden" name="cmd" value="_cart">`

IMPORTANT: These INPUT tags are required exactly as shown above. Do not alter them.

Variations on Basic Variables

This section highlights some useful miscellaneous ideas about Website Payments Standard FORM variables.

The HTML variables interact in various ways. Sometimes their effect is cumulative, sometimes they can cancel each other out, sometimes a variable requires that you also set another variable. These interactions are detailed in the descriptions of the variables in [Appendix A, “Website Payments Standard HTML Variables”](#) and [Appendix B, “Billing and Shipping Address Settings.”](#)

Prompting for Quantity in Buy Now or Donations: undefined_quantity

With Buy Now and Donations, you can require the customer to specify the desired number of copies of the single item by using the undefined_quantity variable:

```
<INPUT TYPE="hidden" name="undefined_quantity" value="1">
```

Recordkeeping with Passthrough Variables

Some variables are exclusively for your own use (such as for tracking orders) and are not recorded or used by PayPal. The values you send to PayPal are returned to you in an Instant Payment Notification (IPN) exactly as you set them. For this reason, they are called passthrough variables.

The following are passthrough variables:

- custom
- item_number or item_number_x
- invoice

Setting the Character Set: charset

You can use the charset FORM variable to specify the character set or character encoding of the data you collect in your website forms and send to PayPal. PayPal sends data to you in the same character set or encoding you specify with the charset variable. For example, the following INPUT tag sets the encoding to UTF-8:

```
<INPUT TYPE="hidden" name="charset" value="utf-8">
```

TABLE 9.2 Character Sets and Encodings Supported by PayPal

Big5 (Traditional Chinese in Taiwan)	ISO-2022-JP	ISO-8859-8	UTF-16BE	US-ASCII	windows-1258
EUC-JP	ISO-2022-KR	ISO-8859-9	UTF-16LE	windows-1250	windows-874
EUC-KR	ISO-8859-1	ISO-8859-13	UTF16_Platform	windows-1251	(Thai)
EUC-TW	(Western European Languages)	ISO-8859-15	mEndian	windows-1252	windows-949
gb2312 (Simplified Chinese)	KOI8-R	(Cyrillic)	UTF16_Opposite	windows-1253	(Korean)
gbk	ISO-8859-2	Shift_JIS	iteEndian	windows-1254	x-mac-greek
HZ-GB-2312	ISO-8859-3	UTF-7	UTF-32	windows-1255	x-mac-turkish
(Traditional Chinese in Hong Kong)	ISO-8859-4	UTF-8	UTF-32BE	windows-1256	x-mac-centraurroman
ibm-862 (Hebrew with European characters)	ISO-8859-5	UTF-16	UTF32_Platform	windows-1257	x-mac-cyrillic
ISO-2022-CN	ISO-8859-6		mEndian		ebcdic-cp-us
	ISO-8859-7		UTF32_Opposite		ibm-1047
			iteEndian		

Setting Return URL on Individual Transactions

With Auto Return turned on in your Profile, you can set the value of the return URL on each individual transaction, overriding the value you have stored on PayPal. For example, you might want to return the customer's browser to a URL on your site that is specific to that customer, perhaps with a session ID or other transaction-related data included in the URL.

To set the return URL for a transaction, include the return variable in the HTML FORM:

```
<INPUT TYPE="hidden" NAME="return" value="URLspecificToThisTransaction">
```

Desired Currency on Individual Transactions

Use the `currency_code` variable on individual transactions to specify the currency of the payment:

```
<INPUT TYPE="hidden" NAME="currency_code" value="PayPalSupportedCurrencyCode">
```

The value of `currency_code` must be a code from [“Managing Currency Balances” on page 52](#).

NOTE: If `currency_code` is not included, the default currency is USD.

Prepopulating FORMs

Account Optional (also called Website Payments Express) allows you to accept payments from customers without a PayPal account. However, checking out with PayPal is often faster than forcing the customer to reenter information that is already stored on PayPal. For repeat purchases, it is to your advantage to get your customers to create a PayPal account.

During a payment transaction, you can prepopulate a FORM by including HTML input variables specifically for this purpose. A complete description of these variables is in [Table A.8, “HTML Variables: Prepopulating PayPal FORMs or Address Overriding](#).

For a detailed description of how prepopulated forms and other settings affect the PayPal billing and shipping addresses, see [Appendix B, “Billing and Shipping Address Settings.”](#)

Sample HTML for FORM Prepopulation

The following sample HTML shows the optional prepopulation fields with the required variables in payment buttons. The field entries must be dynamically generated by your website and included in the URL to which your customers are sent when they make a PayPal payment.

EXAMPLE 9.1 HTML for FORM Prepopulation

```
<form action="https://www.paypal.com/cgi-bin/webscr" method="POST">
  <input type="hidden" name="cmd" value="_cart">
  <input type="hidden" name="business" value="seller@designerfotos.com">
  <input type="hidden" name="item_name" value="hat">
  <input type="hidden" name="item_number" value="123">
  <input type="hidden" name="amount" value="15.00">
  <input type="hidden" name="first_name" value="John">
  <input type="hidden" name="last_name" value="Doe">
  <input type="hidden" name="address1" value="9 Elm Street">
  <input type="hidden" name="address2" value="Apt 5">
  <input type="hidden" name="city" value="Berwyn">
  <input type="hidden" name="state" value="PA">
  <input type="hidden" name="zip" value="19312">
  <input type="hidden" name="night_phone_a" value="610">
  <input type="hidden" name="night_phone_b" value="555">
```

```

        <input type="hidden" name="night_phone_c" value="1234">
        <input type="image" SRC="http://images.paypal.com/images/x-click-
but01.gif" border="0" name="submit" alt="Make payments with PayPal - it's
fast, free and secure!">
    </form>

```

Overriding PayPal-Stored Addresses

For customers who already have PayPal accounts and whom you already prompted for a shipping address before they choose to pay with PayPal, you can use the entered address instead of the address the customer has on file with PayPal. Set the `address_override` variable to 1, as in the following example:

```
<INPUT TYPE="hidden" name="address_override" value="1">
```

You must also include FORM variables that contain the customer's address information, as detailed in [Table A.8, "HTML Variables: Prepopulating PayPal FORMs or Address Overriding."](#)

The customer is shown the passed-in address but cannot edit it. No address is shown if the address is not valid, such as missing required fields, including country, or if the address is not included at all.

For a detailed description of how overriding the the address and other settings affect the PayPal billing and shipping addresses, see [Appendix B, "Billing and Shipping Address Settings."](#)

Sample HTML for Overriding PayPal-Stored Shipping Addresses

The following HTML shows the `address_override` variable in conjunction with the prepopulation variables for overriding a customer's PayPal-stored shipping address.

EXAMPLE 9.2 HTML for Overriding PayPal-Stored Address

```

<form action="https://www.paypal.com/cgi-bin/webscr" method="post">
<input type="hidden" name="cmd" value="_xclick">
<input type="hidden" name="business" value="seller@designerfotos.com">
<input type="hidden" name="item_name" value="Memorex 256MB Memory Stick">
<input type="hidden" name="item_number" value="MEM32507725">
<input type="hidden" name="amount" value="3">
<input type="hidden" name="tax" value="1">
<input type="hidden" name="quantity" value="1">
<input type="hidden" name="no_note" value="1">
<input type="hidden" name="currency_code" value="USD">
<!--
Override the customer's stored PayPal address
-->
<input type="hidden" name="address_override" value="1">
<!-- Set the prepopulation variables that override the stored address -->

```

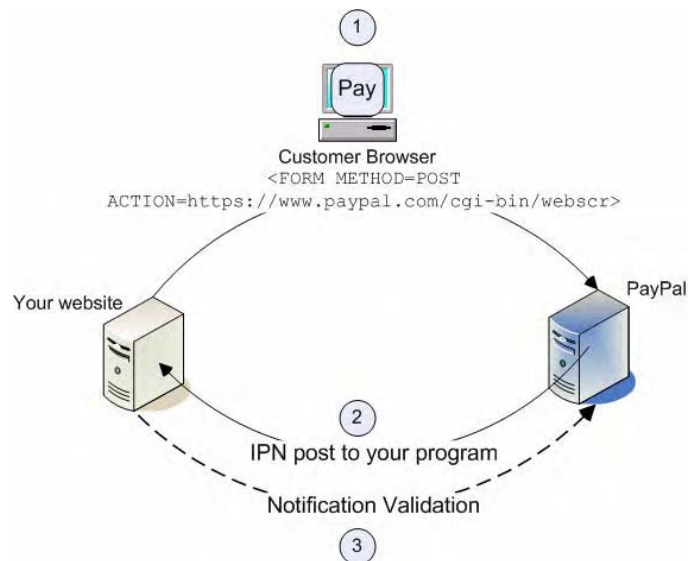
```
<input type="hidden" name="first_name" value="John">
<input type="hidden" name="last_name" value="Doe">
<input type="hidden" name="address1" value="345 Lark Ave">
<input type="hidden" name="city" value="San Jose">
<input type="hidden" name="state" value="CA">
<input type="hidden" name="zip" value="95121">
<input type="hidden" name="country" value="US">
<input type="image" src="https://www.paypal.com/en_US/i/btn/x-click-
but01.gif" border="0" name="submit" alt="Make payments with PayPal - it's
fast, free and secure!">
</form>
```

Instant Payment Notification: `notify_url`

Instant Payment Notification consists of three parts:

1. A customer pays you.
2. PayPal POSTs FORM variables to a URL you specify that runs a program to process the variables.
3. You validate the notification.

FIGURE 9.1 *How IPN Works: Three General Steps*



1. A customer payment or a refund triggers IPN. This payment can be via Website Payments Standard FORMs or via the PayPal Web Services APIs for Express Checkout, MassPay, or RefundTransaction. If the payment has a "Pending" status, you receive another IPN when the payment clears, fails, or is denied.

2. PayPal posts HTML FORM variables to a program at a URL you specify. You can specify this URL either in your Profile or with the `notify_url` variable on each transaction. This post is the heart of IPN. Included in the notification is the customer's payment information (such as customer name, payment amount). All possible variables in IPN posts are detailed in the [Order Management Integration Guide](#). When your server receives a notification, it must process the incoming data.
3. Your server must then validate the notification to ensure that it is legitimate. For details, see the [Order Management Integration Guide](#).



Website Payments Standard HTML Variables

This appendix details all variables for Buy Now, Donations, Add to Cart buttons and shopping carts.

TABLE A.1 *Allowed Values for cmd Variable*

Value of cmd	Description
_xclick	A Buy Now or Donations button
_cart	A shopping cart

TABLE A.2 *HTML Variables: IPN Control notify_url*

Name	Description	Required or Optional	Character Length
notify_url	The URL to which PayPal posts information about the transaction.	Optional	255

TABLE A.3 *HTML Variables: Item Information*

Name	Description	Required or Optional	Character Length
amount	The price or amount of the purchase, not including shipping, handling, or tax. If omitted in Buy Now or Donations, customers can enter an amount at time of purchase. • Optional for Buy Now or Donations • Required for Shopping Cart	See description .	
item_name	Description of item. If omitted in Buy Now or Donations, customers can enter an item name at time of purchase. • Optional for Buy Now or Donations • Required for Shopping Cart	See description .	127
item_number	Passthrough variable for you to track purchases or donations, passed back to you at payment completion. If omitted in Buy Now or Donations, no variable is passed back to you.	Optional	127
quantity	Number of items. The amount, shipping and tax are multiplied by the quantity to derive the total payment amount. If this is a shopping cart transaction, PayPal appends the number of the item (e.g. quantity1, quantity2). NOTE: The value for quantity must be a positive integer. Null, zero, or negative numbers are not allowed.	Optional	

TABLE A.3 HTML Variables: Item Information

Name	Description	Required or Optional	Character Length
undefined_quantity	1: allows buyer to specify the quantity. NOTE: This variable is allowed only in Buy Now or Donations, and not allowed in shopping carts.	Optional	1
on0	First option field name. If omitted, no variable is passed back to you.	Optional	64
on1	Second option field name. If omitted, no variable is passed back to you.	Optional	64
os0	First set of option values. If this option is selected through a text box or radio button, each value should be no more than 64 characters. If this value is entered by the customer in a text field, there is a 200-character limit. If omitted, no variable is passed back to you. NOTE: on0 must also be defined set.	Optional	64 or 200 See description.
os1	Second set of option values. NOTE: on1 must also be set. If this option is selected through a text box or radio button, each value should be no more than 64 characters. If this value is entered by the customer in a text field, there is a 200-character limit. If omitted, no variable is passed back to you.	Optional	64 or 200 See description.

TABLE A.4 HTML Variables: Display Information

Name	Description	Required or Optional	Character Length
add	Add an item to the PayPal-hosted shopping cart. This variable must be set as follows: add=1 The alternative is the display=1 variable, which allows the user to view the contents of the PayPal-hosted shopping cart. If both add and display are specified, display takes precedence.	Required	1
cancel_return	A URL to which the customer's browser is returned if payment is cancelled; for example, a URL on your website that displays a "Payment Canceled" page. Default: Browser is directed to the PayPal website.	Optional	1,024

TABLE A.4 HTML Variables: Display Information

Name	Description	Required or Optional	Character Length
cbt	Sets the text for the Continue button on the PayPal Payment Complete page. NOTE: The return variable must also be set.	Optional	60
cn	Label above the note field. This value is not saved and does not appear in any of your notifications. If omitted, no variable is passed back to you.	Optional	40
cpp_header_image	Sets the image at the top left of the payment page. The image's maximum size is 750 pixels wide by 90 pixels high. PayPal recommends that you provide an image that is stored only on a secure (https) server. For more information, see "Branding PayPal's Payment Pages" on page 25 .	Optional	No limit
cpp_headerback_color	Sets the background color for the header of the payment page. Valid value is case-insensitive six-character HTML hexadecimal color code in ASCII.	Optional	
cpp_headerborder_color	Sets the border color around the header of the payment page. The border is a 2-pixel perimeter around the header space, which has a maximum size of 750 pixels wide by 90 pixels high. Valid value is case-insensitive six-character HTML hexadecimal color code in ASCII.	Optional	
cpp_payflow_color	Sets the background color for the payment page below the header. Valid value is case-insensitive six-character HTML hexadecimal color code in ASCII. NOTE: Background colors that conflict with PayPal's error messages are not allowed; in these cases, the default color is white.	Optional	
cs	Sets the background color of your payment pages. Default or 0 = background color is white. 1 = background color is black.	Optional	
display	Display the contents of the PayPal-hosted shopping cart to the customer. This variable must be set as follows: display=1 The alternative is the add=1 variable, which adds an item to the PayPal-hosted shopping cart. If both add and display are specified, display takes precedence.	Required See description	1

TABLE A.4 HTML Variables: Display Information

Name	Description	Required or Optional	Character Length
image_url	The URL of the 150x50-pixel image displayed as your logo in the upper left corner of PayPal's pages. Default: your business name (if you have a Business account) or your email address (if you have Premier account).	Optional	1,024
no_note	Prompt customer to include a note with payment. Default or 0: customer is prompted to include a note. 1: customer is not prompted to include a note.	Optional	1
no_shipping	Prompt customer for shipping address. Default or 0: customer is prompted to include a shipping address 1: customer is not asked for a shipping address. 2: customer must provide a shipping address.	Optional	1
page_style	Sets the Custom Payment Page Style for payment pages associated with this button/link. somePageStyleName: The name of a page style you have defined. primary: always use the page style set as primary. paypal: use the PayPal default style. Alphanumeric ASCII lower 7-bit characters only, plus underscore. No spaces.	Optional	30
return	The URL to which the customer's browser is returned after completing the payment; for example, a URL on your site that displays a "Thank you for your payment" page. Default: customer is taken to the PayPal website.	Optional	1,024
shopping_url	The value of the Continue Shopping button on PayPal: the URL on your site to which buyers will return when they click Continue Shopping during checkout on PayPal.	Optional	255
rm	"Return method": FORM METHOD used to send data to the URL specified by the return variable after payment completion. NOTE: The rm variable takes effect only if the return variable is also set. Default or 0: All Shopping Cart transactions use the GET method. 1: The customer's browser is redirected to the return URL by the GET method, and no transaction variables are sent. 2: The customer's browser is redirected to the return URL by the POST method, and all transaction variables are also posted.	Optional	1

TABLE A.5 HTML Variables: Transaction Information

Name	Description	Required or Optional	Character Length
address_override	1: The address specified in prepopulation variables overrides the user's stored address. See Table A.8, "HTML Variables: Prepopulating PayPal FORMs or Address Overriding." The customer is shown the passed-in address but cannot edit it. If the address is not valid such as missing any required fields, including country) or not included, no address is shown.	Optional	1
currency_code	The currency of the payment. Defines the currency in which the monetary variables (amount, shipping, shipping2, handling, tax) are denoted. Default: all monetary fields are interpreted as U.S. Dollars.	Optional	
custom	Passthrough variable never presented to your customer. Default: no variable is passed back to you.	Optional	256
handling	Handling charges. This is not quantity-specific. The same handling cost is charged regardless of the number of items purchased. Default: no handling charges are included.	Optional	
invoice	Passthrough variable you can use to identify your invoice number for this purchase. Default: no variable is passed back to you.	Optional	127
shipping	The cost of shipping this item if you have enabled item-specific shipping costs. If shipping is used and shipping2 is not defined, this flat amount is charged regardless of the quantity of items purchased. NOTE: The shipping variable takes effect only if the override checkbox is checked in your Profile. See "Overriding Shipping Calculation on Individual Transactions" on page 41. Default: if Profile-based shipping is enabled, customer is charged the amount or percentage defined in your Profile.	Optional	
shipping2	The cost of shipping each additional item. If omitted, and Profile-based shipping is enabled, your customer is charged the amount or percentage defined in your Profile.	Optional	
tax	Transaction-based tax override variable. Set this to a flat tax amount to apply to the transaction regardless of the buyer's location. This value overrides any tax settings set in your Profile. Default: Profile tax settings (if any) apply.	Optional	
tax_cart	Cart-wide tax, overriding any individual item tax_x value	Optional	

TABLE A.6 HTML Variables Specific to Shopping Carts

Name	Required or Optional	Description	Allowable Values
amount	Required	Price of the item or the total price of all items in the shopping cart.	Any valid currency amount
business	Required	Email address for your PayPal account. NOTE: The value of this variable is normalized to lowercase characters.	Your email address
handling_cart	Optional	Single handling fee to be charged cart-wide. If handling_cart is used in multiple Add to Cart buttons, the handling_cart value of the first item is used.	Any valid currency amount
item_name	Required	Name of the item or a name for the entire Shopping Cart	
paymentaction	Optional	Indicates whether transaction is an authorization to be captured later with PayPal Authorization & Capture on https://www.paypal.com/ . For more information, see the Authorization & Capture Integration Guide .	authorization
upload	Required	Indicates the use of third-party shopping cart	1

TABLE A.7 HTML Variables: Individual Items in Third-Party Shopping Carts

Name	Required or Optional	Description	Character Length
amount_x	Required	Price of item #x.	
handling_x	Optional	The cost of handling for item #x.	
item_name_x	Required	Name of item #x in the cart. Must be alphanumeric.	127
item_number_x	Optional	Passthrough variable for you to track order or other purchase. Default: no variable is passed back to you.	127
on0_x	Optional	First option field name for item #x	64
on1_x	Optional	Second option field name for item #x.	64
os0_x	Optional	First set of option value(s) for item #x. Requires that on0_x also be set.	200
os1_x	Optional	Second set of option value(s) for item #x. Requires that on1_x also be set.	200

TABLE A.7 HTML Variables: Individual Items in Third-Party Shopping Carts

Name	Required or Optional	Description	Character Length
quantity_x	Optional	Quantity of the item #x. NOTE: The value of quantity_x must be a positive integer. Null, zero, or negative numbers are not allowed.	
shipping_x	Optional	The cost of shipping the first piece (quantity of 1) of item #x.	
shipping2_x	Optional	The cost of shipping each additional piece (quantity of 2 or more) of item #x.	
tax_x	Optional	The tax amount for item #x.	

TABLE A.8 HTML Variables: Prepopulating PayPal FORMs or Address Overriding

Variable	Description	Requirements	Character Limit
address1	Street (1 of 2 fields)	Alphanumeric	100
address2	Street (2 of 2 fields)	Alphanumeric	100
city	City	Alphanumeric	40
country	Sets shipping and billing country. See Appendix C for allowable country codes.	Alphabetic	2
first_name	First name	Alphabetic	32
last_name	Last name	Alphabetic	64
lc	Defines the buyer's language for the Login page only. Allowable values: Any two-character country code listed in Appendix C, "Country Codes." The following two-character country codes are supported by PayPal: • AU • DE • FR • IT • GB • ES • US Any other value will default to US.	Alphabetic	2

TABLE A.8 HTML Variables: Prepopulating PayPal FORMs or Address Overriding

Variable	Description	Requirements	Character Limit
night_phone_a	The area code for U.S. phone numbers, or the country code for phone numbers outside the U.S. This will prepopulate the buyer's home phone number.	Numeric	3
night_phone_b	The three-digit prefix for U.S. phone numbers, or the entire phone number for phone numbers outside the U.S., excluding country code. This will prepopulate the buyer's home phone number.	Numeric	3
night_phone_c	The four-digit phone number for U.S. phone numbers. This will prepopulate the buyer's home phone number.	Numeric	3
state	State	Must be two-character official US abbreviation.	2
zip	Postal code	Numeric	32

TABLE A.9 HTML Variables: Prepopulating Business Account Sign-up

Variable	Value	Requirements	Character Limit
business_address1	Business street address	Alphanumeric	128
business_address2	Business street address	Alphanumeric	128
business_city	Business city	Alphanumeric	128
business_state	Business state	Alphanumeric	2
business_zip	Business postal code	Numeric	5
business_country	Business country	Alphabetic	2
business_cs_email	Business's customer service email address	Alphanumeric	128
business_cs_phone_a	Business's customer service phone number area code for U.S. phone numbers, or the country code for phone numbers outside the U.S.	Numeric	3

TABLE A.9 HTML Variables: Prepopulating Business Account Sign-up

Variable	Value	Requirements	Character Limit
<code>business_cs_phone_b</code>	Business's customer service three-digit prefix for U.S. phone numbers, or the entire phone number for phone numbers outside the U.S., excluding country code.	Numeric	3
<code>business_cs_phone_c</code>	Business's customer service four-digit phone number for U.S. phone numbers.	Numeric	4
<code>business_url</code>	URL of the business's website	Alphanumeric	128
<code>business_night_phone_a</code>	Business's area code for U.S. phone numbers, or the country code for phone numbers outside the U.S. This prepopulates the customer's home phone number.	Numeric	3
<code>business_night_phone_b</code>	Business's three-digit prefix for U.S. phone numbers, or the entire phone number for phone numbers outside the U.S., excluding country code. This prepopulates the customer's home phone number.	Numeric	3
<code>business_night_phone_c</code>	Business's four-digit phone number for U.S. phone numbers. This prepopulates the customer's home phone number.	Numeric	4

B

Billing and Shipping Address Settings

NOTE: This applies to U.S. buyers only.

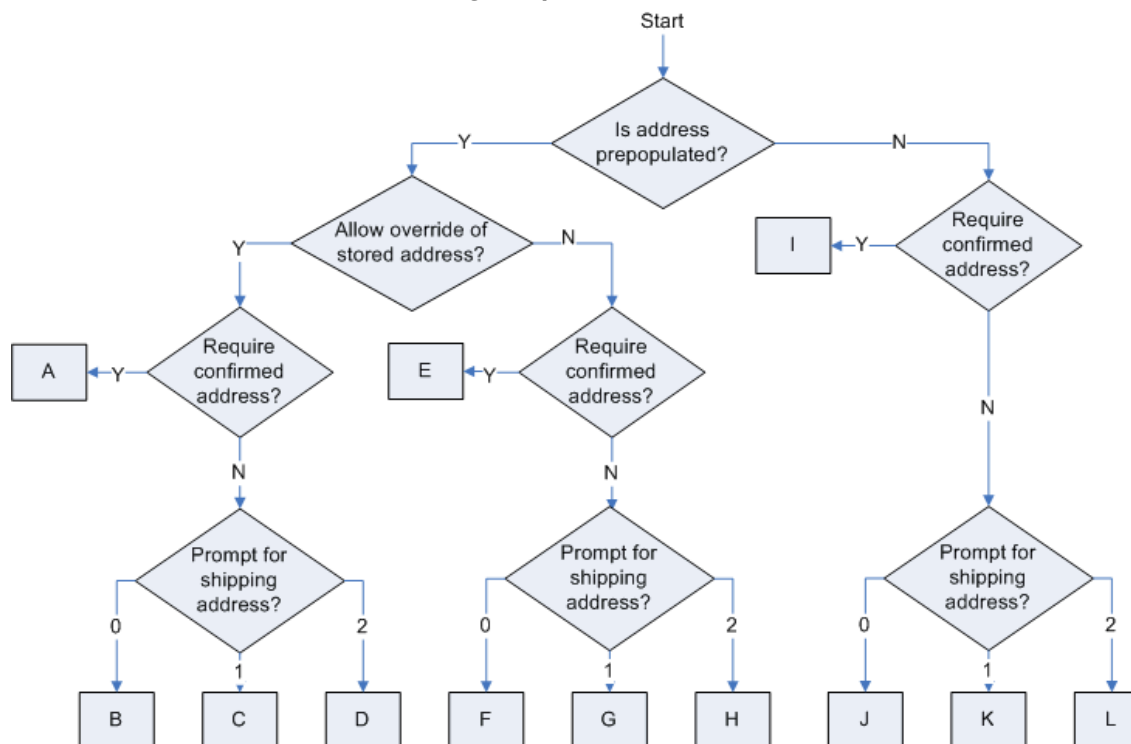
This section describes how HTML variables and PayPal account settings determine whether the buyer can change, add, or override the billing and shipping addresses.

TABLE B.1 *HTML Variables and Account Setting*

	Variables or Account Setting
Is the address prepopulated?	The address variables are described in Table A.8, “HTML Variables: Prepopulating PayPal FORMs or Address Overriding,” on page 117.
Allow override of buyer’s stored address?	address_override
Require confirmed address?	In your PayPal account in the My Account tab, select Profile . Under Selling Preferences , select Payment Receiving Preferences . In Block payments from U.S. users who do not provide a Confirmed Address , select Yes .
Prompt for shipping address?	no_shipping

In the following diagram, the letters A through E each represent an endpoint for the variables and account setting. The following sections, [Basic Website Payments Standard Descriptions](#) and [Account Optional or Website Payments Express Descriptions](#), describe the billing and shipping address behavior for each endpoint.

FIGURE B.1 Variable and Account Setting Endpoints



Basic Website Payments Standard Descriptions

This section describes the billing and shipping address behavior in the basic Website Payments Standard flow, which requires the buyer login or sign up for PayPal. This flow is described in [Chapter 1, “How Website Payments Standard Works.”](#)

The endpoint letters refer to [Figure B.1, “Variable and Account Setting Endpoints.”](#)

Endpoint A

If the prepopulated address is a confirmed address, the **Shipping Address** on the **Review Your Payment** page displays the prepopulated address. The buyer cannot change the shipping address.

If the prepopulated address is not confirmed, PayPal displays the **Add Credit Card or Debit Card** page with the prepopulated address as the billing address. The page displays a message that the address must match the one displayed on their statement. The **Cancel** button is displayed if the merchant has provided a `cancel_return` URL.

Endpoints B, C, and D

The **Shipping Address** on the **Review Your Payment** page displays the prepopulated address. The buyer cannot change the shipping address.

If the prepopulated address is invalid, the payment cannot be processed. PayPal displays an error message.

Endpoint E

If the prepopulated address is a confirmed address, the **Shipping Address** on the **Review Your Payment** page displays the prepopulated address. The buyer can select or add another address. If the buyer selects **Add New Address**, PayPal displays the **Add Credit Card or Debit Card** page.

If the prepopulated address is not a confirmed address or there is no confirmed address in the profile, PayPal displays the **Add Credit Card or Debit Card** page with the address prepopulated.

Endpoints F and H

The **Shipping Address** on the **Review Your Payment** page displays the prepopulated address. The buyer can select or add another address.

If the prepopulated address is invalid, the address is dropped and the address in the profile is displayed, if available. The buyer can select or add another address directly in the page.

Endpoints G and K

The **Review Your Payment** page does not contain a **Shipping Address**.

Endpoint I

If there is a confirmed address in the account, PayPal displays the **Review Your Payment** page. The buyer can select another confirmed address or add another address. If the buyer selects **Add New Address**, they are taken to the **Add Credit Card or Debit Card** page.

If there is not a confirmed address in the account, PayPal displays the **Add Credit Card or Debit Card** page.

Endpoints J and L

The **Shipping Address** on the **Review Your Payment** page displays the buyer's primary address. The buyer can select another address or add another address directly in the page.

Account Optional or Website Payments Express Descriptions

This section describes the billing and shipping address behavior in the Account Optional or Website Payments Express flow, which allows customers to pay you by credit card without signing up for a PayPal account. This flow is described in [“Account Optional or Website Payments Express” on page 30](#).

The endpoint letters refer to [Figure B.1, “Variable and Account Setting Endpoints” on page 122](#).

Endpoint A

The billing page displays the prepopulated address. If the buyer modifies the address and attempts to submit the page, PayPal returns an error that the address cannot be modified. The **Shipping Address** on the **Review Your Payment** page displays this address. The buyer cannot change the shipping address.

If the prepopulated address is bad, PayPal displays an error page indicating the buyer cannot proceed with payment because the merchant provided an invalid address.

Endpoints B, C, and D

The billing page displays the prepopulated address. The buyer can modify the billing address. The **Shipping Address** on the **Review Your Payment** page displays this address. The buyer cannot change the shipping address.

If the prepopulated address is bad, PayPal prepopulates the billing page and the buyer can modify it. There is no **Shipping Address** on the **Review Your Payment** page.

Endpoint E

The billing page displays the prepopulated address. The buyer can modify the billing address. The **Shipping Address** on the **Review Your Payment** page displays the address from the billing page. The buyer cannot change the shipping address. The shipping address always matches the billing address, so modifications to the billing address updates the shipping address.

If the prepopulated address is invalid, the billing page displays the address and the buyer can modify it.

Endpoints F and H

The billing page displays the prepopulated address. The buyer can modify the billing address. The **Shipping Address** on the **Review Your Payment** page displays the address from the billing page. The buyer can change the shipping address.

If the prepopulated address is invalid, the billing page displays the address and the buyer can modify it.

Endpoint G

The billing page displays the prepopulated address. The buyer can modify the billing address. There is no **Shipping Address** on the **Review Your Payment** page.

Endpoint I

The **Shipping Address** on the **Review Your Payment** page displays the address from the billing page. The buyer cannot change the shipping address. The shipping address should always match the billing address, so if the user modifies the billing information and address, the shipping address will be updated as well.

Endpoints J and L

The **Shipping Address** on the **Review Your Payment** page displays the address from the billing page. The buyer can change the shipping address.

Endpoint K

There is no **Shipping Address** on the **Review Your Payment** page.



Billing and Shipping Address Settings

Account Optional or Website Payments Express Descriptions



Country Codes

NOTE: This table lists country codes defined by [ISO 3166-1](#).

Table 1: Country Codes

Country	Code
AFGHANISTAN	AF
ÅLAND ISLANDS	AX
ALBANIA	AL
ALGERIA	DZ
AMERICAN SAMOA	AS
ANDORRA	AD
ANGOLA	AO
ANGUILLA	AI
ANTARCTICA	AQ
ANTIGUA AND BARBUDA	AG
ARGENTINA	AR
ARMENIA	AM
ARUBA	AW
AUSTRALIA	AU
AUSTRIA	AT
AZERBAIJAN	AZ
BAHAMAS	BS
BAHRAIN	BH
BANGLADESH	BD
BARBADOS	BB

Country	Code
BELARUS	BY
BELGIUM	BE
BELIZE	BZ
BENIN	BJ
BERMUDA	BM
BHUTAN	BT
BOLIVIA	BO
BOSNIA AND HERZEGOVINA	BA
BOTSWANA	BW
BOUVET ISLAND	BV
BRAZIL	BR
BRITISH INDIAN OCEAN TERRITORY	IO
BRUNEI DARUSSALAM	BN
BULGARIA	BG
BURKINA FASO	BF
BURUNDI	BI
CAMBODIA	KH
CAMEROON	CM
CANADA	CA
CAPE VERDE	CV
CAYMAN ISLANDS	KY

Country	Code	Country	Code
CENTRAL AFRICAN REPUBLIC	CF	EQUATORIAL GUINEA	GQ
CHAD	TD	ERITREA	ER
CHILE	CL	ESTONIA	EE
CHINA	CN	ETHIOPIA	ET
CHRISTMAS ISLAND	CX	FALKLAND ISLANDS (MALVINAS)	FK
COCOS (KEELING) ISLANDS	CC	FAROE ISLANDS	FO
COLOMBIA	CO	FIJI	FJ
COMOROS	KM	FINLAND	FI
CONGO	CG	FRANCE	FR
CONGO, THE DEMO- CRATIC REPUBLIC OF THE	CD	FRENCH GUIANA	GF
COOK ISLANDS	CK	FRENCH POLYNESIA	PF
COSTA RICA	CR	FRENCH SOUTHERN TERRITORIES	TF
COTE D'IVOIRE	CI	GABON	GA
CROATIA	HR	GAMBIA	GM
CUBA	CU	GEORGIA	GE
CYPRUS	CY	GERMANY	DE
CZECH REPUBLIC	CZ	GHANA	GH
DENMARK	DK	GIBRALTAR	GI
DJIBOUTI	DJ	GREECE	GR
DOMINICA	DM	GREENLAND	GL
DOMINICAN REPUBLIC	DO	GRENADA	GD
ECUADOR	EC	GUADELOUPE	GP
EGYPT	EG	GUAM	GU
EL SALVADOR	SV	GUATEMALA	GT
		GUERNSEY	GG

Country	Code
GUINEA	GN
GUINEA-BISSAU	GW
GUYANA	GY
HAITI	HT
HEARD ISLAND AND MCDONALD ISLANDS	HM
HOLY SEE (VATICAN CITY STATE)	VA
HONDURAS	HN
HONG KONG	HK
HUNGARY	HU
ICELAND	IS
INDIA	IN
INDONESIA	ID
IRAN, ISLAMIC REPUB- LIC OF	IR
IRAQ	IQ
IRELAND	IE
ISLE OF MAN	IM
ISRAEL	IL
ITALY	IT
JAMAICA	JM
JAPAN	JP
JERSEY	JE
JORDAN	JO
KAZAKHSTAN	KZ
KENYA	KE
KIRIBATI	KI
KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF	KP

Country	Code
KOREA, REPUBLIC OF	KR
KUWAIT	KW
KYRGYZSTAN	KG
LAO PEOPLE'S DEMO- CRATIC REPUBLIC	LA
LATVIA	LV
LEBANON	LB
LESOTHO	LS
LIBERIA	LR
LIBYAN ARAB JAMA- HIRIYA	LY
LIECHTENSTEIN	LI
LITHUANIA	LT
LUXEMBOURG	LU
MACAO	MO
MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF	MK
MADAGASCAR	MG
MALAWI	MW
MALAYSIA	MY
MALDIVES	MV
MALI	ML
MALTA	MT
MARSHALL ISLANDS	MH
MARTINIQUE	MQ
MAURITANIA	MR
MAURITIUS	MU
MAYOTTE	YT
MEXICO	MX

Country	Code	Country	Code
MICRONESIA, FEDER- ATED STATES OF	FM	PALAU	PW
MOLDOVA, REPUBLIC OF	MD	PALESTINIAN TERRI- TORY, OCCUPIED	PS
MONACO	MC	PANAMA	PA
MONGOLIA	MN	PAPUA NEW GUINEA	PG
MONTSERRAT	MS	PARAGUAY	PY
MOROCCO	MA	PERU	PE
MOZAMBIQUE	MZ	PHILIPPINES	PH
MYANMAR	MM	PITCAIRN	PN
NAMIBIA	NA	POLAND	PL
NAURU	NR	PORTUGAL	PT
NEPAL	NP	PUERTO RICO	PR
NETHERLANDS	NL	QATAR	QA
NETHERLANDS ANTI- LLES	AN	REUNION	RE
NEW CALEDONIA	NC	ROMANIA	RO
NEW ZEALAND	NZ	RUSSIAN FEDERATION	RU
NICARAGUA	NI	RWANDA	RW
NIGER	NE	SAINT HELENA	SH
NIGERIA	NG	SAINT KITTS AND NEVIS	KN
NIUE	NU	SAINT LUCIA	LC
NORFOLK ISLAND	NF	SAINT PIERRE AND MIQUELON	PM
NORTHERN MARIANA ISLANDS	MP	SAINT VINCENT AND THE GRENADINES	VC
NORWAY	NO	SAMOA	WS
OMAN	OM	SAN MARINO	SM
PAKISTAN	PK		

Country	Code
SAO TOME AND PRINC- IPE	ST
SAUDI ARABIA	SA
SENEGAL	SN
SERBIA AND MON- TENEGRO	CS
SEYCHELLES	SC
SIERRA LEONE	SL
SINGAPORE	SG
SLOVAKIA	SK
SLOVENIA	SI
SOLOMON ISLANDS	SB
SOMALIA	SO
SOUTH AFRICA	ZA
SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS	GS
SPAIN	ES
SRI LANKA	LK
SUDAN	SD
SURINAME	SR
SVALBARD AND JAN MAYEN	SJ
SWAZILAND	SZ
SWEDEN	SE
SWITZERLAND	CH
SYRIAN ARAB REPUB- LIC	SY
TAIWAN, PROVINCE OF CHINA	TW
TAJIKISTAN	TJ

Country	Code
TANZANIA, UNITED REPUBLIC OF	TZ
THAILAND	TH
TIMOR-LESTE	TL
TOGO	TG
TOKELAU	TK
TONGA	TO
TRINIDAD AND TOBAGO	TT
TUNISIA	TN
TURKEY	TR
TURKMENISTAN	TM
TURKS AND CAICOS ISLANDS	TC
TUVALU	TV
UGANDA	UG
UKRAINE	UA
UNITED ARAB EMIR- ATES	AE
UNITED KINGDOM	GB
UNITED STATES	US
UNITED STATES MINOR OUTLYING ISLANDS	UM
URUGUAY	UY
UZBEKISTAN	UZ
VANUATU	VU
VENEZUELA	VE
VIET NAM	VN
VIRGIN ISLANDS, BRIT- ISH	VG

Country	Code
VIRGIN ISLANDS, U.S.	VI
WALLIS AND FUTUNA	WF
WESTERN SAHARA	EH
YEMEN	YE
ZAMBIA	ZM
ZIMBABWE	ZW

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