[PACKT] PUBLISHING   open source*
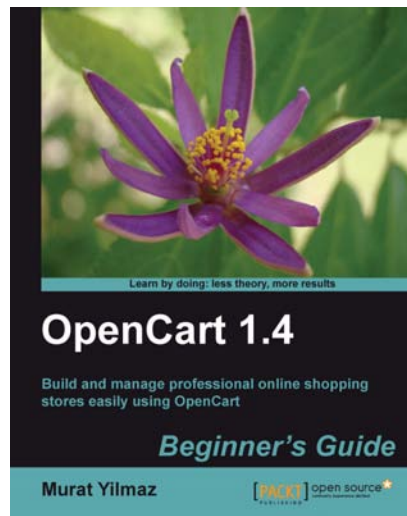community experience distilled

OpenCart 1.4
Beginner's Guide

Murat Yilmaz

Chapter No.5
"Setting Payment Models"

In this package, you will find:

A Biography of the author of the book

A preview chapter from the book, Chapter NO.5 "Setting Payment Models"

A synopsis of the book's content

Information on where to buy this book

About the Author

Murat Yilmaz is a so ware developer, and online entrepreneur who lives in Moscow. Murat has over 10 years of experience in different IT fields including development of web driven solutions, database and OLAP systems and has worked in several international companies in Istanbul (Turkey), Anchorage (Alaska), and Moscow (Russia) as a consultant. He currently runs his own blog and online advertising network. He holds a bachelor degree in Computer Science, Marmara University at Istanbul. He spends his free me playing progressive rock songs on the guitar and enjoys writing for his gadgets and technology blog at `www.vubx.com`.

He is also author of OpenX Ad Server Beginner's Guide from Packt, which teaches people about building and maintaining professional, online advertising solutions for their web sites.

> For my newborn son Deniz, I wish that your life will always be full of sunshine and a blue sea of dreams.

OpenCart 1.4 Beginner's Guide

OpenCart is a popular open source shopping cart solution and provides elegantly written tools to establish a fully functional online store from scratch in a very short me with intuitive screens.

On the other hand, it can be a difficult task for beginners to go beyond the basics and apply all the features which they will require for their business.

This practical book gives you hands-on experience of using and managing OpenCart, helping you start feature-rich, professional online stores easily. It also teaches you how to organize your online store effectively in terms of products, payments, shipping, orders, and customer relations.

What This Book Covers

Chapter 1, *Installing OpenCart* shows a step-by-step installation of OpenCart store on a hosting by emphasizing the important points that require extra a en on. These include understanding the system requirements before installation, setting file, folder permissions of OpenCart files, creating a database for the store, and completing the installation with the wizard.

Chapter 2, *Categories, Products and Option*s shows different ways of organizing an online store after introducing the reader important terms. This is followed by hands-on examples on adding categories, subcategories, brand definitions, product information with images. Then, the chapter dives into details of extending a simple product with op on features for customers to buy.

Chapter 3, *Tax Managemen*t provides in-depth information about one of the most essential elements of every online store, taxes. The chapter introduces Geo Zone, Tax Class terms and how to apply taxes according to shipping addresses of customers. Throughout the chapter, the reader will learn how to add geo zones, assign geo zones to tax classes and choose correct tax class for products. The chapter ends with samples on displaying prices without taxes on front-page and show them only on checkout pages as a final price.

Chapter 4, *Configuring Store Settings* first gives the basic information about configuring essential store information including setting default local settings. After that, the information is extended by activation of SEO support, application of SEO (search engine optimization) on categories, product pages with detailed hands-on examples. The chapter continues to explain how to install new templates, activating different modules such as

Google Talk for online help functionality. The chapter ends with the application of other important modules like Privacy policy, terms and conditions.

Chapter 5, *Setting Payment Models* explains, with the help of a diagram, a typical online credit card process by emphasizing all important sections. The chapter continues to explain what merchant accounts, payment gateways are. Throughout the chapter, the most famous and widely used payment gateway, PayPal is very thoroughly investigated by many hands-on examples and is shown how to integrate different PayPal services (Standard and Pro versions) to a store according to individual needs. The chapter ends with applied examples on configuring bank transfer, cash on delivery, cheque/money order.

Chapter 6, *Setting Shipping Methods* is all about configuring and enabling the most modern shipping methods for store customers. The chapter starts with a sec on which shows how to limit shipment to certain countries/regions. The chapter continues with examples on setting free shipping, fl at rate shipping, per item shipping, weight based shipping methods. Finally, two of the popular shipping services UPS (United Parcel Service) and USPS (United States Postal Service) are discussed in detail with examples.

Chapter 7, *Offering Coupons Discounts* explains what kind of coupons for customers are supported by OpenCart. These include percentage based, fixed amount and with free shipping coupons. We will then learn how to apply discounts for selected products for a period of time as a way of promo on. Finally, it is shown how to activate wholesale discount for bulk purchases. At the end of this chapter, the reader will have a strong knowledge on coupons and how to correctly activate them according to store's detailed requirements.

Chapter 8, *Understanding Order Lifecycle* explains whole process of online orders as a flowchart at the beginning. This enables readers to see the whole picture of what is going on at each step of order management. Then, the chapter explains how orders are tracked on administration panel and by customers on storefront. The chapter continues with an explanation on generating invoices. Finally, it shows how to change order statuses manually according to process of handling the order. Some sample order statuses discussed are pending, processing, shipped, completed, cancelled.

Chapter 9, *Managing Customers and Users* starts with important discussion on why customer registration has advantages and how to set important customer related store settings. The chapter continues with hands-on example on grouping customers according to activity, such as VIP or high income customers. We will learn how to optimize customer relationships of a store by sending regular email newsletters and direct messages. Finally, the chapter discusses how to optimize the backend administration by opening new user groups, assigning users to groups with different permissions (such as a person only deals with orders while another one only changes/enters information about products).

Chapter 10, *Localization* provides essential information on how to find and download different language packs for the store, uploading language packs, changing individual language texts, adding new currencies, and updating them according to the latest exchange rates each day automatically.

Chapter 11, *Upgrading OpenCart* will teach the reader how to make backups of a running OpenCart store, downloading latest version, uploading the new fi les to a hosting server, running the upgrade script, checking the newly updated store and finally information about how to restore to the old version if upgrade fails or has serious problems.

5
Setting Payment Models

Enabling a store to accept credit cards online and other alternative payment methods for customers is vital for high availability of an online store.

In this chapter we shall learn:

- The basics of online credit card processing
- Merchant account
- Payment gateway
- PayPal as a payment method
- The differences between several PayPal services
- Bank Transfer, Cheque or Money Order, Cash on Delivery payment options

We should clearly understand the three core elements of accepting credit card payments for an online store before starting on the details of online credit card processing.

Shopping cart system

The shopping cart is special software which allows customers to add / delete products to a basket from a store catalogue and then complete the order. The shopping cart also automatically updates the total amount which the customer will pay according to product additions or deletions on the basket.

OpenCart provides a built-in shopping cart system which provides all such functionality. So, you don't need to install or buy separate software for the shopping cart.

Merchant account

A merchant account is a special account type which differs from a usual bank account. Its sole purpose is to accept credit card payments. Opening a merchant account requires making a contract with the credit card network providers. Authorized card payments on the store are transferred to the merchant account. Then, as a merchant we can transfer the amount from merchant account to bank account (checking account).

Since opening a merchant account can be a tiresome process for most businesses and individuals, there are various online businesses which can provide this functionality. We will learn about them in the next section.

> Curious readers can learn the details of merchant accounts on the following links:
>
> `http://en.wikipedia.org/wiki/Merchant_account`
>
> `http://www.merchantaccount.com/`

Payment gateway

A payment gateway is an online analogue of a physical credit card processing terminal that we can locate in retail shops. Its function is to process credit card information and return the results back to the store system.

You can imagine the payment gateway as an element in the middle of an online store and credit card network. The software part of this service is included in OpenCart but we will have to use one of the payment gateway services, which we will briefly review in the next section.

Understanding online credit card processing

The following diagram shows the standard credit card processing flowchart in detail. Note that it is not essential to know every detail in steps shown in a red background color. These parts are executed on behalf of us by the payment system which we will use, so it is isolated both from the store and customer. For example, PayPal is such a system, which we will learn about now in detail.
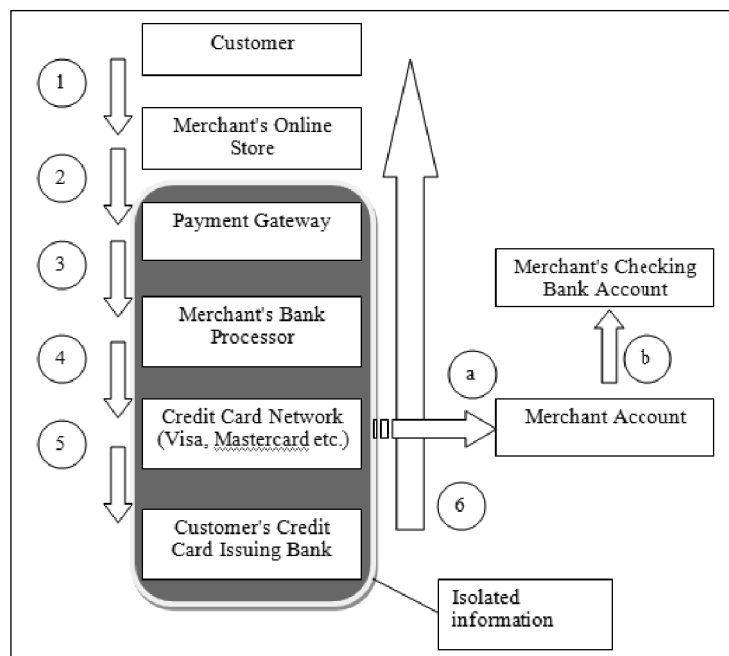
Let's explain the flowchart step by step to clearly understand the whole process:

1. A customer successfully enters into the checkout page after filling the shopping cart with the products. Then, he/she enters the credit card information and clicks on the **Pay** button.

2. Now, the store checkout page sends these details along with the total amount to the payment gateway securely.

3. The payment gateway starts a series of processes. First of all, the information is passed to the merchant's bank processor where the merchant account was opened before.

4. The information is then sent to the credit card network by this processor. Visa and MasterCard are two of the most popular credit card networks.

5. The credit card network processes the validity of the credit card and sends the information to the customer's credit card issuer bank.

6. As a result, the bank rejects or approves the transaction and sends the information back to the credit card network. Through the same routing in reverse, the payment information is finally submitted back to the online store with a special code. All this is done in a few seconds and the information flow starting from the payment gateway is isolated from both the customer and merchant. It means that we don't have to deal with what's going on after sending information to the payment gateway. As a merchant, we only need the result of the transaction.

After the information is processed by credit card network during Step 6; the transaction funds are transferred to the merchant account by the credit card network as shown in Step **a**. Then, the merchant can transfer the funds from the merchant account to the usual checking bank account automatically or manually, as shown in Step **b**.

OpenCart payment methods

The current OpenCart version supports many established payment systems, including PayPal services, Authorize.net, Moneybookers, 2Checkout, and so on, as well as basic payment options such as Cash on Delivery, Bank Transfer, Check/money order, etc.
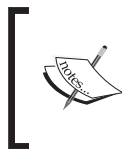
> We can also get more payment gateway modules on the OpenCart extensions section by searching in Payment Methods.
>
> ```
> http://www.opencart.com/index.php?route=extension/
> extension
> ```

We will now briefly learn the most widely used methods and their differences and similarities to each other.

PayPal

PayPal is one of the most popular and easiest to use systems for accepting credit cards for an online store. PayPal has two major products to be used in OpenCart through built-in modules:

- PayPal Website Payment Standard
- PayPal Website Payment Pro

Both of these payment methods provide both payment gateway and merchant account functionality. Let's understand the details of each now.

PayPal Website Payment Standard

It is the easiest method to implement accepting credit card payments on an online store. For merchants, a simple bank account and a PayPal account is enough to take payments. There are no monthly fees or setup costs charged by PayPal. The only cost is a fixed small percentage taken by PayPal for each transaction. So, you should consider this on price valuations of items in the store.

> Here is the link to learn about the latest commission rates per transaction:
>
> `http://merchant.paypal.com`

When the customer clicks on the **checkout** button on OpenCart, he/she will be redirected to the PayPal site to continue with the payment.

As you can see from the following sample screenshot, a customer can provide credit card information instantly or log in to his/her PayPal account to pay from the balance in the PayPal account:

In the next step, after the final review, the user clicks on the **Pay Now** button.

> Notice that PayPal automatically localizes the total amount according to the PayPal owner's account currency. In this case, the price is calculated according to Dollar – Euro exchange rates.

If the information below is correct, click **Pay Now** to complete your payment.

Learn more about how PayPal withdraws funds.

Description	Unit Price	Quantity	Amount
Best Shoe Store	$0.01	1	$0.01
		Item total:	$0.01
		Total:	$0.01 USD

Enter gift certificate, reward, or discount

Payment Method:

PayPal Balance   €0.01 EUR

PayPal's exchange rate as of Apr 2, 2010: 1 Euro = 1.32079 U.S. Dollars

More funding options

Ship to:

Change

Contact Information:

Pay Now

After the payment, the PayPal screen shows the result of the payment. The screen doesn't return to the merchant store automatically. There is a button for it: **Return to Merchant**.
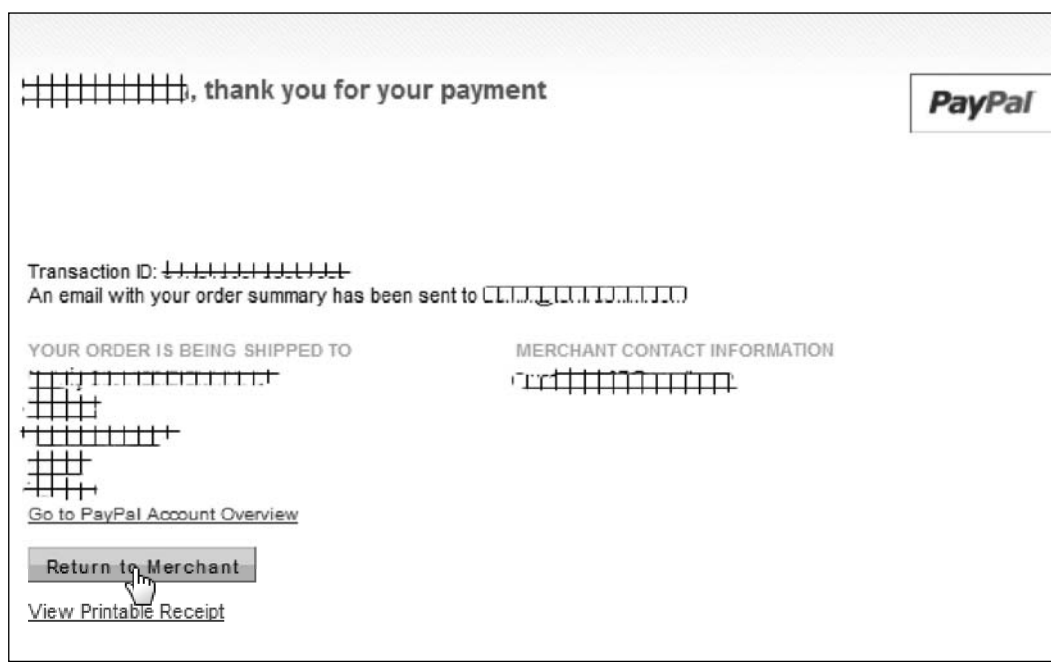
Finally, the website user is informed about the result of the purchase in the OpenCart store.
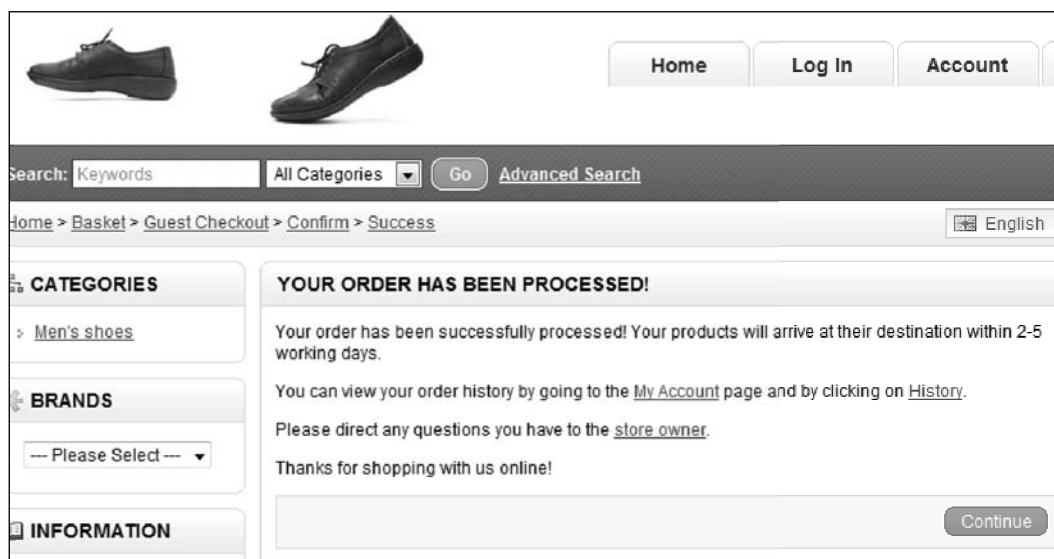
The main advantage of PayPal Website Payment Standard is that it is easy to implement; many online people are familiar with using it. We can state one minor disadvantage. Some people may abandon the purchase since the payment gateway would leave the store temporarily to complete the transaction on the PayPal website.

PayPal Website Payment Pro

This is the paid PayPal solution for an online store as a payment gateway and merchant account. The biggest difference from PayPal Website Payment Standard is that customers do not leave the website for credit card processing. The credit card information is completely processed in the online store as it is the popular method of all established e-commerce websites. Even the customers will not know about the processor of the cards. Unless we put a PayPal logo ourselves, this information is well encapsulated.

Using this method also only requires a bank account and PayPal account for the merchant. PayPal charges a monthly fee and a one-time setup fee for this service. The individual transactions are also commissioned by PayPal.

This is a very professional way of processing credit cards online for a store but it can have a negative effect on some customers. Some customers can require seeing some indication of trust from the store before making a purchase. So, depending the on store owner's choice, it would be wise to put a remark and logo of PayPal stating that **«Credit card is processed by PayPal safely and securely»**

For a beginner OpenCart administrator who wants to use PayPal for the online store, it is recommended to get experience with the free Standard payment option and then upgrade to the Pro option.

We can get more information on PayPal Website Payment Pro service at:

`http://merchant.paypal.com`

At time of writing this book, PayPal only charges a fixed monthly fee ($30) and commissions on each transaction. There are no other setup costs or hidden charges.

PayFlow Pro payment gateway

If we already have a merchant account, we don't need to pay extra for it by using PayPal Standard or PayPal Pro. PayFlow Pro is cheaper than other PayPal services and allows us to accept credit card payments to an existing merchant account.

> Unfortunately, OpenCart currently does not support it as a built-in module but there are both free and paid modules. You can get them from the OpenCart official contributions page at:
>
> ```
> http://www.opencart.com/index.php?route=extension/
> extension
> ```

Time for action – configuring PayPal Website Payment Standard

In this section, we will learn how to configure PayPal Website Payment Standard on OpenCart.

1. Let's open the **Extensions** | **Payments** menu in the administration panel.
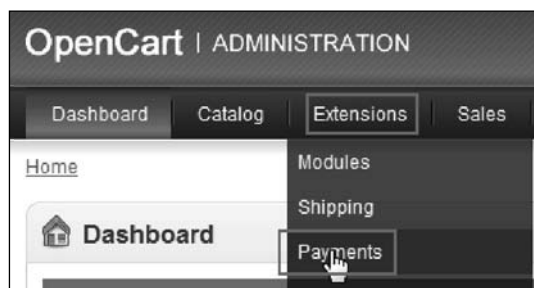
2. We will find the **PayPal** line from the available payment method listings and click on the **Install** button.

3. The next step is to **Edit** PayPal settings.

4. We provide our PayPal **E-Mail** address. Note that the payments will be made to this email address. So, be very careful to enter it correctly. We choose **Test Mode** as **No**.

> We could select **Test Mode** as **Yes**. If we do this, the online store will send the transactions on the checkout page to virtual test accounts, which we set on the PayPal developer system beforehand. Actually, we do not need to set **Test Mode** to **Yes**. There is an easy way to test the system with real transactions, as we will learn about soon.

We set **Transaction Method** to **Sale**. As a common practice, we set **Order Status** to **Pending**. Since fraud payments are common, we will have a chance to look at the details of the payment and the order, before announcing to the customer that his or her order is complete.

Set **Geo Zone** to **All Zones** and **Status** to **Enabled**. Finally, let's click on the **Save** button.

What just happened?

We have just finished enabling and setting up PayPal Standard Payment method. From now on, the customers can use PayPal or their credit cards to pay for the products online.

Have a go hero – testing PayPal Website Payment Standard method

Now, it is your turn to the test just-enabled PayPal Website Payment Standard method. All you need is to use another PayPal account with some balance on it and set some product prices as 0.01. This way, we can make tests on real PayPal transactions with small amounts. Register a customer and buy several products with this PayPal account on our store.

Time for action – configuring PayPal Website Payment Pro

In this section, we will learn how to configure PayPal Website Payment Pro on OpenCart.

> We already have a Website Payment Pro paid account to use this functionality. The details are at this link: `https://merchant.paypal.com/us/cgi-bin/?&cmd=_render-content&content_ID=merchant/wp_pro`.

1. First of all, we visit `http://www.paypal.com` and log in to the system. After this, let's click on the **Profile** link.
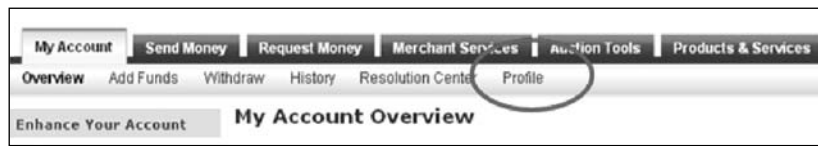
2. Let's click on the **API Access** menu.
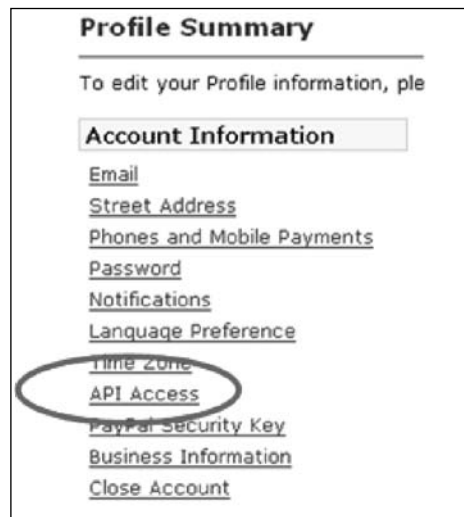
3. We will click on the **Request API Credentials** link.

4. We will need to select the **Request API signature** option. Let's click on the **Agree and Submit** button.

5. The next page will list **API Username**, **API Password,** and **Signature**. Let's take a note of these values and click on the **Done** button to complete.

6. Let's open the **Extensions | Payments** menu in the administration panel.
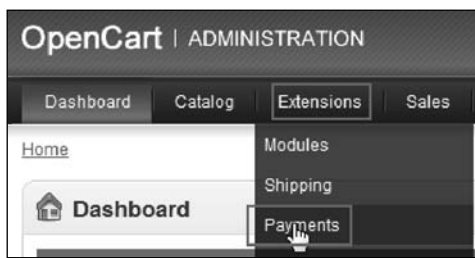
7. Let's click on the **Install** link near the **PayPal Website Payment Pro** option.

8. We will edit the payment configuration details page. Let's provide the **API Username**, **API Password,** and **API Signature** values that we have retrieved from PayPal website in previous steps. We have the option to make operations on the Test server. Let's choose **No** for **Test Mode** to enable it on a real payment gateway. Let's choose **Transaction Mode** as **Sale**. We choose **Order Status** as **Pending** and **Status** as **Enabled**. This payment option will be available for **All Zones** according to current **Geo Zone** selection. Let's click on the **Save** button to complete the operation.

What just happened?

We have just finished enabling and setting the PayPal Website Payment Pro method. From now on, the customers can use their credit cards to pay for the products online without leaving the store for the payment process. All operations are done in store without any visible connection to PayPal.

> Readers who want to use PayPal Website Payments Pro UK version instead can go to the following link to open their business accounts and get API values:
>
> ```
> https://www.paypal-business.co.uk/process-online-
> payments-with-paypal/index.htm
> ```

Have a go hero – testing PayPal Website Payment Pro method

Now it is your turn to test just the enabled PayPal Website Payment Pro method. Make several test purchases with small 0.01 amounts on products. Be sure that all operations are completed in store without leaving to PayPal.

Authorize.net

This is a paid payment gateway service with similar functionality to PayPal Website Payment Pro. It means that customers can provide their credit card information without leaving the website and without any sign of `authorize.net` processing the information. So, this one is a paid service with an included payment gateway service and merchant account.

> Visit and compare the prices against the similar PayPal Website Payment Pro at `www.authorize.net`.
>
> We can also get more payment gateway modules on the OpenCart extensions section by searching in Payment Methods.
>
> `http://www.opencart.com/index.php?route=extension/extension`

Bank transfer

We can easily achieve being able to accept bank transfer payments by activating a module in OpenCart. The order of the customer is held in pending status until the bank payment is confirmed.

Time for action – accepting bank transfer on orders

In this section, we will learn how to enable the bank transfer module and use it.

1. Let's open the administration panel and click on the **Install** button near the **Bank Transfer** line.

Payment Method	Status	Action
AlertPay	Disabled	[Install]
Authorize.Net (AIM)	Disabled	[Edit] [Uninstall]
Bank Transfer	Disabled	[Install]
Cheque / Money Order	Disabled	[Install]
Cash On Delivery	Disabled	[Install]

2. Let's click on the **Edit** button.

3. We should provide our bank account information. The sample **Bank Transfer Instructions** are shown below. Set **Order Status** as **Pending** and **Status** as **Enabled**. Click on the **Save** button.

> We could choose a specific **Geo Zone** to enable bank transfer solely for this zone. In our example, it is available to all customers worldwide. Notice that we can not have the same type but only separate payment options for different zones at the same time. It would require a third party module, which you can request or look for at the OpenCart extensions section.
>
> ```
> http://www.opencart.com/index.php?route=extension/
> extension
> ```

4. As you can see from the following screenshot, the Bank Transfer option will also be enabled on the checkout page as a payment method for the customer:

5. The following screenshot shows how the Bank Transfer Instructions we have provided will be shown before the customer confirms the order:

6. The following screenshot shows the order details on the administration panel. Notice that we had assigned **Status** as **Pending** by default:

What just happened?

We have learned how to activate a bank transfer for our store. Then, we checked how it would look on checkout pages and in the order details screen in the administration panel.

Cheque / money order

With this payment option, we provide make cheque payable to information to the customer. The customer sends the cheque / money order to the store's default address by using this name. After we clear the check, order items are sent to the customer.

Cash on delivery

By using this option, the customer pays the money on delivery to the courier. We can use this option if we handle shipping with our own couriers. Some online stores also give the ability to customer to reject the order at the time of delivery. A common usage is with clothes and shoe stores. Customer tries the apparel and pays only for courier service if he/she doesn't like the product or it doesn't suit.

Have a go hero – activating cheque / money order and cash on delivery options

Now, it is your turn to enable check/money order and cash on delivery options. They are very similar to the bank transfer module and need similar fields.

Pop quiz – understanding online credit card processing

Which of the following statements are true?

1. PayPal does not provide a default merchant account. So, we have to open a merchant account before starting to use the PayPal Standard or Pro options.

2. To accept credit cards online, we have to make an agreement with a bank and/or credit networks such as Visa and Mastercard.

3. PayFlow Pro only provides payment gateway functionality. We should already have an opened merchant account before we start using it.

Summary

In this chapter, we have seen the essentials of online credit card processing and how a purchase is achieved as a result of complicated checks. Hopefully, we won't need to enter the details of credit card networks or merchant accounts. We have seen that payment gateways (with merchant account) like PayPal, `Authorize.net` can easily provide such solutions. We have seen how to enable PayPal and other basic payment methods for OpenCart.

In the next chapter, we will learn different shipping options and how to start using them.

Where to buy this book

You can buy OpenCart 1.4 Beginner's Guide from the Packt Publishing website:
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