**第7章 错误与异常处理**

**1. 异常处理**

**try{**

**//code goes here**

**}**

**throw new Exception('message',code);**

**catch( Exception $e){**

**//handle exception**

**}**

**basic\_exception.php ——抛出并捕获一个异常**

**—————————————————————————————————**

**<?php**

**try {**

**throw new Exception("A terrible error has occurred", 42);**

**}**

**catch (Exception $e) {**

**echo "Exception ". $e->getCode(). ": ". $e->getMessage()."<br />".**

**" in ". $e->getFile(). " on line ". $e->getLine(). "<br />";**

**}**

**?>**

**—————————————————————————————————**



**2. Exception类**

**内置类——Exception，其构造函数需要两个参数：错误消息和错误代码。**

**除了构造函数，该类还提供了如下的内置方法：**

**getCode()——返回传递给构造函数的代码**

**getMessage()——返回传递给构造函数的消息**

**getFile()——返回产生异常的代码文件的完整路径**

**getLine()——返回代码文件中产生异常的代码行号**

**getTrace()——返回一个包含了产生异常的代码回退路径的数组**

**getTraceAsString()——返回与getTrace()方向相同的信息，该信息将被格式化成一个字符串**

**\_toString()——允许简单地显示一个Exception对象，并且给出以上所有方法可以提供的信息。**

**3. 用户自定义异常**

**user\_defined\_exception.php——用户定义Exception例代码如下：**

**———————————————————————————————**

**<?php**

**class myException extends Exception**

**{**

**function \_\_toString()**

**{**

**return "<table border=\"1\">**

**<tr>**

**<td><strong>Exception ".$this->getCode()."**

**</strong>: ".$this->getMessage()."<br />"."**

**in ".$this->getFile()." on line ".$this->getLine()."**

**</td>**

**</tr>**

**</table><br />";**

**}**

**}**

**try**

**{**

**throw new myException("A terrible error has occurred", 42);**

**}**

**catch (myException $m)**

**{**

**echo $m;**

**}**

**?>**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**以上代码中，声明了一个新的异常类myException，该类继承自Exception基类，差异在于，重载了\_toString()方法，从而为打印异常提供了一个更好的方法。**

**4. Bob的汽车零部件商店应用程序的异常**

**在第二章的例子中，我们用普通文件格式保存订单数据。写文件可能出现三种情况的错误：文件无法打开、无法获得写锁、文件无法写入。我们为每一种可能性都创建了一个异常类。**

**file\_exceptions.php——文件I/O相关的异常**

**—————————————————————————————————**

**<?php**

**class fileOpenException extends Exception**

**{**

**function \_\_toString()**

**{**

**return "fileOpenException ". $this->getCode()**

**. ": ". $this->getMessage()."<br />"." in "**

**. $this->getFile(). " on line ". $this->getLine()**

**. "<br />";**

**}**

**}**

**class fileWriteException extends Exception**

**{**

**function \_\_toString()**

**{**

**return "fileWriteException ". $this->getCode()**

**. ": ". $this->getMessage()."<br />"." in "**

**. $this->getFile(). " on line ". $this->getLine()**

**. "<br />";**

**}**

**}**

**class fileLockException extends Exception**

**{**

**function \_\_toString()**

**{**

**return "fileLockException ". $this->getCode()**

**. ": ". $this->getMessage()."<br />"." in "**

**. $this->getFile(). " on line ". $this->getLine()**

**. "<br />";**

**}**

**}**

**?>**

**—————————————————————————————————**

**重新编写包括异常处理的processorder.php——订单处理脚本代码如下：**

**———————————————————————————————**

**<?php**

**require\_once("file\_exceptions.php");**

**// create short variable names**

**$tireqty = $\_POST['tireqty'];**

**$oilqty = $\_POST['oilqty'];**

**$sparkqty = $\_POST['sparkqty'];**

**$address = $\_POST['address'];**

**$DOCUMENT\_ROOT = $\_SERVER['DOCUMENT\_ROOT'];**

**?>**

**<html>**

**<head>**

**<title>Bob's Auto Parts - Order Results</title>**

**</head>**

**<body>**

**<h1>Bob's Auto Parts</h1>**

**<h2>Order Results</h2>**

**<?php**

**$date = date('H:i, jS F');**

**echo "<p>Order processed at ".$date."</p>";**

**echo '<p>Your order is as follows: </p>';**

**$totalqty = 0;**

**$totalqty = $tireqty + $oilqty + $sparkqty;**

**echo "Items ordered: ".$totalqty."<br />";**

**if( $totalqty == 0) {**

**echo "You did not order anything on the previous page!<br />";**

**} else {**

**if ( $tireqty > 0 ) {**

**echo $tireqty." tires<br />";**

**}**

**if ( $oilqty > 0 ) {**

**echo $oilqty." bottles of oil<br />";**

**}**

**if ( $sparkqty > 0 ) {**

**echo $sparkqty." spark plugs<br />";**

**}**

**}**

**$totalamount = 0.00;**

**define('TIREPRICE', 100);**

**define('OILPRICE', 10);**

**define('SPARKPRICE', 4);**

**$totalamount = $tireqty \* TIREPRICE**

**+ $oilqty \* OILPRICE**

**+ $sparkqty \* SPARKPRICE;**

**$totalamount=number\_format($totalamount, 2, '.', ' ');**

**echo "<p>Total of order is ".$totalamount."</p>";**

**echo "<p>Address to ship to is ".$address."</p>";**

**$outputstring = $date."\t".$tireqty." tires \t".$oilqty." oil\t"**

**.$sparkqty." spark plugs\t\$".$totalamount**

**."\t". $address."\n";**

**// open file for appending**

**try**

**{**

**if (!($fp = @fopen("$DOCUMENT\_ROOT/../orders/orders.txt", 'ab')))**

**throw new fileOpenException();**

**if (!flock($fp, LOCK\_EX))**

**throw new fileLockException();**

**if (!fwrite($fp, $outputstring, strlen($outputstring)))**

**throw new fileWriteException();**

**flock($fp, LOCK\_UN);**

**fclose($fp);**

**echo "<p>Order written.</p>";**

**}**

**catch (fileOpenException $foe)**

**{**

**echo "<p><strong>Orders file could not be opened.**

**Please contact our webmaster for help.</strong></p>";**

**}**

**catch (Exception $e)**

**{**

**echo "<p><strong>Your order could not be processed at this time.**

**Please try again later.</strong></p>";**

**}**

**?>**

**</body>**

**</html>**

**—————————————————————————————————**

**良好的编程习惯要求，try代码块的代码量较少，并且在代码块的结束处捕获相关异常。这使得异常处理代码更容易编写和维护，因为可以看到所处理的内容。**

**如果异常没有匹配的catch语句块，将报告fatal error。**