



# **SNS COLLEGE OF ENGINEERING**

Kurumbapalayam (Po), Coimbatore – 641 107

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## **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING-IOT Including CS&BCT**

**COURSE NAME : 19SB602 FULL STACK DEVELOPMENT FOR NEXT  
GENERATION IOT**

**III YEAR / VI SEMESTER**

**Unit III- CORE PHP WITH MODEL–VIEW–CONTROLLER**

**Topic : Exception, MySQL**



# PHP Exception Handling

Exception handling is used to change the normal flow of the code execution if a specified error (exceptional) condition occurs. This condition is called an exception.

The current code state is saved

The code execution will switch to a predefined (custom) exception handler function

Depending on the situation, the handler may then resume the execution from the saved code state, terminate the script execution or continue the script from a different location in the code



## Different error handling methods:

Basic use of Exceptions

Creating a custom exception handler

Multiple exceptions

Re-throwing an exception

Setting a top level exception handler

Note: Exceptions should only be used with error conditions, and should not be used to jump to another place in the code at a specified point.



## Basic Use of Exceptions

When an exception is thrown, the code following it will not be executed, and PHP will try to find the matching "catch" block.

If an exception is not caught, a fatal error will be issued with an "Uncaught Exception" message.

Lets try to throw an exception without catching it:

```
<?php
//create function with an exception
function checkNum($number) {
    if($number>1) {
        throw new Exception("Value must be 1 or below");
    }
    return true;
}
//trigger exception
checkNum(2);
```



## Try, throw and catch

To avoid the error from the example above, we need to create the proper code to handle an exception.

Proper exception code should include:

**try** - A function using an exception should be in a "try" block. If the exception does not trigger, the code will continue as normal. However if the exception triggers, an exception is "thrown"

**throw** - This is how you trigger an exception. Each "throw" must have at least one "catch"

**catch** - A "catch" block retrieves an exception and creates an object containing the exception information



```
<?php
//create function with an exception
function checkNum($number) {
    if($number>1) {
        throw new Exception("Value must be 1 or
below");
    }
    return true;
}
```



```
//trigger exception in a "try" block
```

```
try {
```

```
    checkNum(2);
```

```
    //If the exception is thrown, this text will not be shown
```

```
    echo 'If you see this, the number is 1 or below';
```

```
}
```

```
//catch exception
```

```
catch(Exception $e) {
```

```
    echo 'Message: ' . $e->getMessage();
```

```
}
```

```
?>
```



## Rules for exceptions

Code may be surrounded in a try block, to help catch potential exceptions

Each try block or "throw" must have at least one corresponding catch block

Multiple catch blocks can be used to catch different classes of exceptions

Exceptions can be thrown (or re-thrown) in a catch block within a try block





## MySQL

MySQL is a database system used on the web

MySQL is a database system that runs on a server

MySQL is ideal for both small and large applications

MySQL is very fast, reliable, and easy to use

MySQL uses standard SQL

MySQL compiles on a number of platforms

MySQL is free to download and use

MySQL is developed, distributed, and supported by Oracle Corporation

MySQL is named after co-founder Monty Widenius's daughter: My

The data in a MySQL database are stored in tables. A table is a collection of related data, and it consists of columns and rows.



Databases are useful for storing information categorically. A company may have a database with the following tables:

Employees  
Products  
Customers  
Orders



## PHP + MySQL Database System

PHP combined with MySQL are cross-platform (you can develop in Windows and serve on a Unix platform)

### Database Queries

A query is a question or a request.

We can query a database for specific information and have a record set returned.

Look at the following query (using standard SQL):

```
SELECT LastName FROM Employees
```

The query above selects all the data in the "LastName" column from the "Employees" table.

To learn more about SQL, please visit our SQL tutorial.



## PHP Connect to MySQL

PHP 5 and later can work with a MySQL database using:

MySQLi extension (the "i" stands for improved)

PDO (PHP Data Objects)

Earlier versions of PHP used the MySQL extension. However, this extension was deprecated in 2012.





# Open a Connection to MySQL



Before we can access data in the MySQL database, we need to be able to connect to the server:

Example (MySQLi Object-Oriented) Get your own PHP Server

```
<?php
```

```
$servername = "localhost";
```

```
$username = "username";
```

```
$password = "password";
```

```
// Create connection
```

```
$conn = new mysqli($servername, $username, $password);
```

```
// Check connection
```

```
if ($conn->connect_error) {
```

```
    die("Connection failed: " . $conn->connect_error);
```

```
}
```

```
echo "Connected successfully";
```



## Create a MySQL Database Using MySQLi and PDO

The CREATE DATABASE statement is used to create a database in MySQL.

The following examples create a database named "myDB":

### Example (MySQLi Object-oriented)

```
<?php
$servername = "localhost";
$username = "username";
$password = "password";
// Create connection
$conn = new mysqli($servername, $username, $password);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
```



```
// Create database
$sql = "CREATE DATABASE myDB";
if ($conn->query($sql) === TRUE) {
    echo "Database created successfully";
} else {
    echo "Error creating database: " . $conn->error;
}

$conn->close();
?>
```



## Create a MySQL Table Using MySQLi and PDO

The CREATE TABLE statement is used to create a table in MySQL.

We will create a table named "MyGuests", with five columns: "id", "firstname", "lastname", "email" and "reg\_date":

```
CREATE TABLE MyGuests (  
id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY,  
firstname VARCHAR(30) NOT NULL,  
lastname VARCHAR(30) NOT NULL,  
email VARCHAR(50),  
reg_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP ON UPDATE  
CURRENT_TIMESTAMP  
)
```





## Insert Data Into MySQL Using MySQLi and PDO

After a database and a table have been created, we can start adding data in them.

Here are some syntax rules to follow:

The SQL query must be quoted in PHP

String values inside the SQL query must be quoted

Numeric values must not be quoted

The word NULL must not be quoted

The INSERT INTO statement is used to add new records to a MySQL table:

```
INSERT INTO table_name (column1, column2, column3,...)
```

```
VALUES (value1, value2, value3,...)
```



## Delete Data From a MySQL Table Using MySQLi and PDO

The DELETE statement is used to delete records from a table:

```
DELETE FROM table_name  
WHERE some_column = some_value
```



Any Query????

Thank you.....