

Web Development with PHP

Practical - 11

MVC

Exercise

1. Implement simple employee information management functionality using MVC.

Manage Employee Data like Employee ID, name, department. Provide insert, view, update and delete functionality using appropriate design

Also Manage Leaves Taken by Employee: id, emp-id, leave date, leave reason, leave-status. Provide facility to request leave, approve disapprove leave and list leave records.

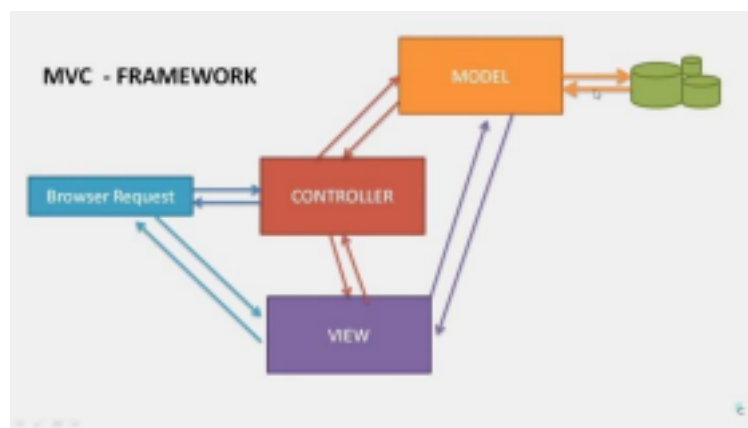
Model View Controller is a form of software architecture used in software engineering. The basic principle of MVC is that the data presentation should be kept separate from the logic.

MVC separates the application into:

- **The model:** This is the component that communicates with the database instructing it to manipulate data input. It is a conduit between the view and the controller. Once The information is passed to the view or controller, it is no longer relevant to the model

The view: The view is responsible for user interaction. The user's requests and reactions are transferred to the controller which responds accordingly. For instance, when a user clicks on a link, the action is triggered in the controller.

- **The controller:** The controller processes data input by the user. Without user interaction, the controller cannot carry out any action.



MVC project structure

- controller
 - Index.php -> control the model and view
- Model
 - Arrymodel.php -> deals with the data
- View
 - About.php
 - Home.php -> display page information
 - Erro.php
- Index.php

Index. Php

// This file contains the routing information

<?php

```
// include controller file.
include ("control/controller.php");

$obj = new controller();
$function='home';

// redirect to the controller based on
URL if(isset($_GET['function']) &&
$_GET['function']!='')
{ $function = $_GET['function'];
} if($function=='home')
{ $obj->home();
}
elseif($function=='insert')
{
    $obj->insert();
}
elseif($function=='display')
{ $obj->display();
}
elseif($function=='update'){
    $obj->update();
}
else{
    $obj->error();
}

?>
```

Controller.php

```
<?php
class controller
```

```

{ public $modelobj;
    function __construct()
    { // include view files for header and footer
include ("view/header.php");
        include ("view/footer.php");
        include ("model/modelclass.php");
        // create model class object and establish connection
$this->modelobj = new modelclass();
        $this->modelobj->connection();

    }
    function home()
    {
        // include ("view/header.php");
        echo "Home page";

    }
    // insert called when insert() called from index.php
function insert()
    {
        $id = $_POST['bid'];
        $name = $_POST['bname'];
        $price = $_POST['bprice'];
        //calling a model class insert method
        $this->modelobj->insertvalue($id,$name,$price);

    }

// called when display() called from index.php
function display()
{

```

```

        echo "<p>Display page here</p>";
// model class display method to display data
        $resultset = $this->modelobj->displaydata();
        // call display.php to display the data
include ("view/display.php");

    }
    function error(){

        include ("view/error.php");

    }
// called when update() called from index.php
function update()
{
    $name = $_POST['bname'];
    echo $name;
    $resultset = $this->modelobj->updatedata ($name);

    if($resultset > 0 ){
        echo "<script> alert('". $resultset . "rows are affected ')"
</script>";
    } else
        echo "<script> alert('no row updated') </script>";
    }

}

```

Database in phpmyadmin

Book table(id,bname,price)

Modelclass.php

```
<?php
```

```

class modelclass{
    private $conn;
    function connection(){
        $this->conn = new
mysqli("localhost:3308","username","password","persondb");
        // echo "<p> connection successfully </p>";
        if ($this->conn->connect_error) {
            die("Connection failed: " .
                $conn->connect_error); }
    }

    function connclose(){
        $this->conn->close();
    }

    function insertvalue($id,$name,$price)
    {
        try{
            $sql = "insert into book(bid,bname,price) values(?,?,?)";
            $stmt= $this->conn->prepare($sql);
            $stmt->bind_param("isi",$id,$name,$price);
            $result = $stmt->execute();
            echo "<p> inserted successfully </p>";
            return $result;
        }catch(Exception $e){
            include("view/error.php");
            echo "<p>". $e->getMessage . "</p>";
        }
    }

    function displaydata()
    {
        $sql = "select *from book";
    }

```

```

        $result = $this->conn->query($sql);
        $noofrow = $result->num_rows;

        return $result;

    }

    function updatedata($name){
        $newname = "new ".$name;
        $sql = "update book set bname = '" . $newname . "' where bname='".
$name. "'";
        $result = $this->conn->query($sql);
        $noofrow = $this->conn->affected_rows;
        return($noofrow);
    }
}
?>

```

View folder contains , header.php, footer.php and display.php,error.php,insert.php,update.php

Header.php file

```

<body>

<nav>
    <a href="index.php?function=home">Home</a>
    <a href="view/insert.php">Insert</a>
    <a href="index.php?function=display">Display</a>
    <a href="view/update.php">Update</a>
</nav>
</body>

```

Display.php

```

<body>

```

```

<?php
    $noofrow = $resultset->num_rows; ?>

<table>
<tr style="background-color: #5cd65c;" >
    <th > Book id </th>
    <th> bookname </th>
    <th> Book price </th>
</tr>
<?php
for ($i=0;$i<=$noofrow;$i++)
{
    $row = $resultset->fetch_array(MYSQLI_ASSOC);
    echo "<tr>";
    echo "<th>". $row['bid'] . "</th>";
    echo "<th>". $row['bname'] . "</th>";
    echo "<th>". $row['price'] . "</th>";
    echo "</tr>";
}
?>
</table>
</body>

```

Insert.php

Contains the form which takes input bookid,bookname and price form user and press insert button. On pressing insert control moves to index.php .

Form index.php control transfer to controller

Controller transfer control to model class which insert data into

database. `<form action="../index.php?function=insert" method="post">`

Display.php

// it display the data which is come from model class to controller and from controller data display to view .

```
<body>
```



```
<?php
//print_r($resultset);
$noofrow = $resultset->num_rows; ?>

<table>

<tr style="background-color: #5cd65c;" >

    <th > Book id </th>

    <th> bookname </th>

    <th> Book price </th>

</tr>

<?php
for ($i=0;$i<=$noofrow;$i++)
{
    $row = $resultset->fetch_array(MYSQLI_ASSOC);
    echo "<tr>";
    echo "<th>". $row['bid'] . "</th>";
    echo "<th>". $row['bname'] . "</th>";
    echo "<th>". $row['price'] . "</th>";
    echo "</tr>";
}
?>

</table>
```