

# Faculty of Engineering, University of Jaffna

## Department of Computer Engineering.

### EC5070 – Database Systems

#### Lab Instructions Sheet 02

Date: 02.09.2022

Time: 1.30pm to 4.30pm

Intended Learning Outcome:

By the end of this laboratory, the student should be able to apply database programming with store procedure.

Instructions:

- Any plagiarized work will be given 0 marks.
- Submit your lab work as a zip file named LAB01\_20YYEXXX (20YYEXXX – Your Registration Number) on/before the given deadline via teams.
- The zip file should contain the code files and database file.
- Here XAMPP and PHP are used to create the homepage for client programming
- References you may use.
  - <https://www.w3schools.com/php/default.asp>
  - [https://www.w3schools.com/sql/sql\\_stored\\_procedures.asp](https://www.w3schools.com/sql/sql_stored_procedures.asp)

## Data base programming with PHP and MySQL

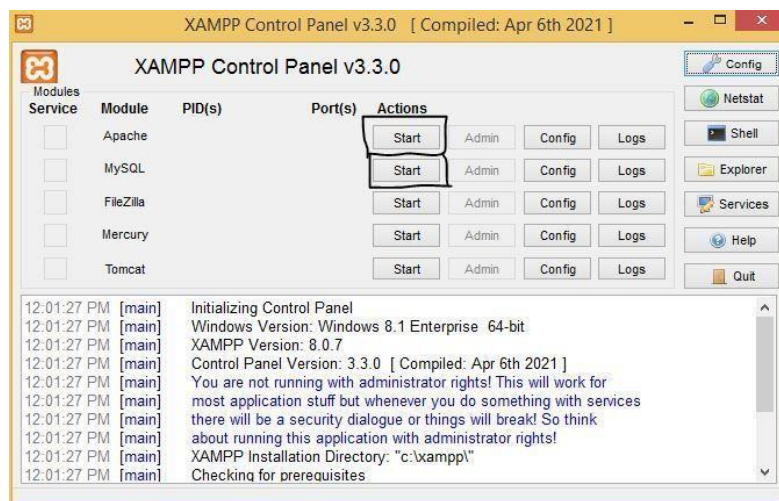
### Setup a database

**Step 01:** Download the XAMPP from this below link

<https://www.apachefriends.org/download.html>

**Step 02:** In search bar type “XAMPP Control Panel” and select on that. A new window will popup.

**Step 03:** Start the Apache and MySQL modules.

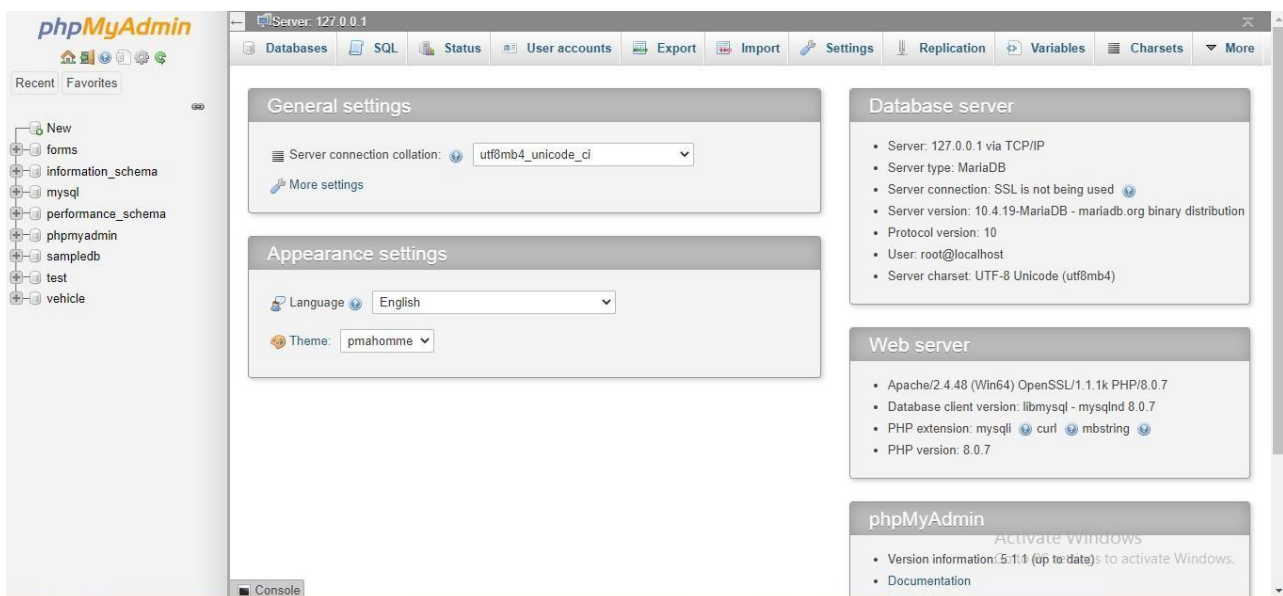


Now both are working properly (you can see the green color highlighter)



## Create a database and table

**Step01:** Go to any browser and type in URL tab “localhost/phpmyadmin/”



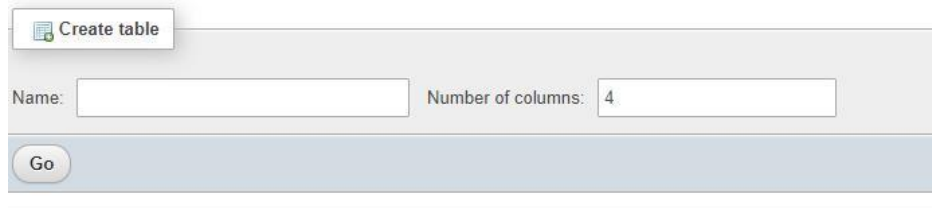
## Step02: Database creation

Click on new then new will opened.



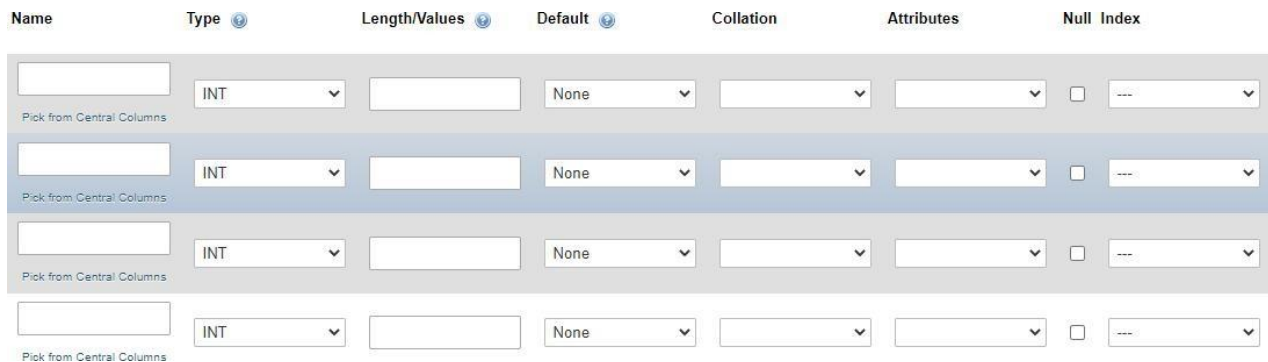
Type your database name and click on create button

## Step03: Create a table



Put the table name and number of fields.

## Step04: Setup the table fields



**Note:** A\_I is the option for the auto increment numbers.

Click on the save button.

## Step05: Open the notepad++ or other suitable editors.

- Create a new folder into below path.
- C:\xampp\htdocs
- Save the file into above folder with “.php” extension.

## **Store procedure with PHP**

### **Step 1– Create a database**

Open browser type <http://localhost/phpmyadmin>, create a database named 'spcruddb'

### **Step 2– Create a table and insert the values**

Create a table with suitable parameters. After this run the SQL script or import the SQL file.

```
DROP TABLE IF EXISTS `tblusers`;
CREATE TABLE `tblusers` (
  `id` int(11) NOT NULL,
  `FirstName` varchar(150) NOT NULL,
  `LastName` varchar(150) NOT NULL,
  `EmailId` varchar(120) NOT NULL,
  `ContactNumber` char(11) NOT NULL,
  `Address` varchar(255) NOT NULL,
  `PostingDate` timestamp NOT NULL DEFAULT current_timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

INSERT INTO `tblusers` (`id`, `FirstName`, `LastName`, `EmailId`,
`ContactNumber`, `Address`, `PostingDate`) VALUES
(123, 'Bala', 'Ravi', 'balaR@gmail.com', '1111111111', 'Jaffna', '2020-12-14 16:05:29'),
(124, 'Jorj', 'Fernando', 'jorj@gmail.com', '1234567890', 'Kandy', '2020-12-14 16:58:36'),
(135, 'Akilan', 'Chandran', 'akil@gmail.com', '1236547890', 'Kilinochchi', '2020-12-14 16:59:49');
```

### **Step 3– Create a database connection file (.php file)**

Create a connection file and place the code given below :

```
<?php
define('DB_SERVER','localhost');
define('DB_USER','root');
define('DB_PASS' , '');
define('DB_NAME', 'spcruddb');
$con = mysqli_connect(DB_SERVER,DB_USER,DB_PASS,DB_NAME);
// Check connection
if (mysqli_connect_errno())
{
    echo "Failed to connect to MySQL: " . mysqli_connect_error();
}
?>
```

## Step 4 : Insert a record in database

**Step 4.1 Create an insert.php file for insert record in the database. This page includes an HTML form with an input field where we can fill the data.**

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <title>PHP with Stored Procedure </title>
    <meta name="viewport" content="width=device-width, initial-
scale=1">
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.0/css/bootstrap.min.
css" rel="stylesheet">
    <script src="https://code.jquery.com/jquery-1.11.1.min.js"></script>
    <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.0/js/bootstrap.min.js
"></script>
</head>
<body>
<div class="container">
<div class="row">
<div class="col-md-12">
<h3>Insert Record | PHP CRUD Operations using Stored Procedure</h3>
<hr />
</div>
</div>

<form name="insertrecord" method="post">
<div class="row">
<div class="col-md-4"><b>First Name</b>
<input type="text" name="firstname" class="form-control" required>
</div>
<div class="col-md-4"><b>Last Name</b>
<input type="text" name="lastname" class="form-control" required>
</div>
</div>

<div class="row">
<div class="col-md-4"><b>Email id</b>
<input type="email" name="emailid" class="form-control" required>
</div>
<div class="col-md-4"><b>Contactno</b>
<input type="text" name="contactno" class="form-control" maxlength="10"
required>
</div>
</div>

<div class="row">
```

```

<div class="col-md-8"><b>Address</b>
<textarea class="form-control" name="address" required></textarea>
</div>
</div>

<div class="row" style="margin-top:1%">
<div class="col-md-8">
<input type="submit" name="insert" value="Submit">
</div>
</div>

</form>

</div>
</div>
</body>
</html>

```

#### Step 4.2: Create a stored procedure for data insertion “sp\_insert”

```

DROP PROCEDURE IF EXISTS `sp_insert`$$
CREATE PROCEDURE `sp_insert` (`fname` VARCHAR(120), `lname`
VARCHAR(120), `emailid` VARCHAR(150), `cntnumber` BIGINT(12), `address`
VARCHAR(255)) BEGIN
insert into tblusers(FirstName,LastName,EmailId,ContactNumber,Address)
value(fname,lname,emailid,cntnumber,address);
END$$

```

#### Step 4.3: PHP Code for Data Insertion

```

<?php
// include database connection file
require_once'dbconfig.php';
if(isset($_POST['insert']))
{
// Posted Values
$fname=$_POST['firstname'];
$lname=$_POST['lastname'];
$emailid=$_POST['emailid'];
$contactno=$_POST['contactno'];
$address=$_POST['address'];
// Call the store procedure for insertion
$sql=mysqli_query($con,"call
sp_insert('$fname','$lname','$emailid','$contactno','$address')");
if($sql)
{
// Message for successfull insertion
echo "<script>alert('Record inserted successfully');</script>";
echo "<script>window.location.href='index.php'</script>";
}
}

```

```

else
{
// Message for unsuccessful insertion
echo "<script>alert('Something went wrong. Please try
again');</script>";
echo "<script>window.location.href='index.php'</script>";
}
}
?>

```

## Step 5: Read record from the database

### Step 5.1: Create a stored procedure (sp\_read) for read data

```

DROP PROCEDURE IF EXISTS
`sp_read` $$ CREATE PROCEDURE `sp_read` ()
BEGIN
select * from tblusers;
END $$

```

### Step 5.2: Create a index.php file for read all records from database.

```

<?php
// include database connection file
require_once 'dbconfig.php';

?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <title>PHP CRUD Operations using Stored Procedure </title>
    <meta name="viewport" content="width=device-width, initial-
scale=1">
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.0/css/bootstrap.min.
css" rel="stylesheet">
    <style type="text/css">

    </style>
    <script src="https://code.jquery.com/jquery-1.11.1.min.js"></script>
    <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.0/js/bootstrap.min.js
"></script>
    <script
src="https://ajax.googleapis.com/ajax/libs/jquery/1.9.1/jquery.min.js"><
/script>
    <script
src="https://getbootstrap.com/dist/js/bootstrap.min.js"></script>
</head>
<body>
<div class="container">

```

```

<div class="row">

<div class="col-md-12">
  <h3>PHP CRUD Operations using Stored Procedure</h3> <hr />
  <a href="insert.php"><button class="btn btn-primary"> Insert
  Record</button></a>
  <div class="table-responsive">
    <table id="mytable" class="table table-bordered table-striped">
      <thead>
        <th>#</th>
        <th>First Name</th>
        <th>Last Name</th>
        <th>Email</th>
        <th>Contact</th>
        <th>Address</th>
        <th>Posting Date</th>
        <th>Edit</th>
      </thead>
      <tbody>

        <?php
        $sql =mysqli_query($con, "call sp_read()");
        $cnt=1;
        $row=mysqli_num_rows($sql);
        if($row>0){
        while ($result=mysqli_fetch_array($sql)) {
        ?>
          <tr>
            <td><?php echo htmlentities($cnt);?></td>
            <td><?php echo htmlentities($result['FirstName']);?></td>
            <td><?php echo htmlentities($result['LastName']);?></td>
            <td><?php echo htmlentities($result['EmailId']);?></td>
            <td><?php echo htmlentities($result['ContactNumber']);?></td>
            <td><?php echo htmlentities($result['Address']);?></td>
            <td><?php echo htmlentities($result['PostingDate']);?></td>

            <td><a href="update.php?id=<?php echo
            htmlentities($result['id']);?>"><button class="btn btn-primary btn-
            xs"><span class="glyphicon glyphicon-pencil"></span></button></a></td>
          </tr>

        <?php
        // for serial number increment
        $cnt++;
        } } else { ?>
        <tr>
          <td colspan="9" style="color:red; font-weight:bold;text-
          align:center;"> No Record found</td>
        </tr>
        <?php } ?>
      </tbody>

```



```

</table>
</div>

</div>
</div>
</div>
</body>
</html>

```

## Step 6 : Update record in the database

### Step 6.1 : Create a stored procedure (sp\_sp\_readarow) for read data of a particular row.

```

DROP PROCEDURE IF EXISTS `sp_readarow`$$
CREATE PROCEDURE `sp_readarow` (IN `rid` INT(5)) BEGIN
select * from tblusers where id=rid;
END$$

```

### Step 5.2 : Get data in HTML Form

create update.php file. For updating a record we have to get the row id of that record and store in \$id. We access the \$\_GET['id'] variable to do it.

Code for gets a record based on the given id. Through this way, we can get data autofill-data in HTML Form.

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <title>PHP CURD Operation using Stored Procedure </title>
    <meta name="viewport" content="width=device-width, initial-
scale=1">
    <link
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.0/css/bootstrap.min.
css" rel="stylesheet">
    <script src="https://code.jquery.com/jquery-1.11.1.min.js"></script>
    <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.0/js/bootstrap.min.js
"></script>
</head>
<body>

<div class="container">

<div class="row">
<div class="col-md-12">
<h3>Update Record | PHP CRUD Operations using Stored Procedure</h3>
<hr />
</div>

```

```

</div>

<?php
// Get the userid

$userid=intval($_GET['id']);
$sql =mysqli_query($con, "call sp_readarow('$userid')");
while ($result=mysqli_fetch_array($sql)) {
?>
<form name="insertrecord" method="post">
<div class="row">
<div class="col-md-4"><b>First Name</b>
<input type="text" name="firstname" value="<?php echo
htmlentities($result['FirstName']);?>" class="form-control" required>
</div>
<div class="col-md-4"><b>Last Name</b>
<input type="text" name="lastname" value="<?php echo
htmlentities($result['LastName']);?>" class="form-control" required>
</div>
</div>

<div class="row">
<div class="col-md-4"><b>Email id</b>
<input type="email" name="emailid" value="<?php echo
htmlentities($result['EmailId']);?>" class="form-control" required>
</div>
<div class="col-md-4"><b>Contactno</b>
<input type="text" name="contactno" value="<?php echo
htmlentities($result['ContactNumber']);?>" class="form-control"
maxlength="10" required>
</div>
</div>

<div class="row">
<div class="col-md-8"><b>Address</b>
<textarea class="form-control" name="address" required><?php echo
htmlentities($result['Address']);?></textarea>
</div>
</div>
<?php } ?>

<div class="row" style="margin-top:1%">
<div class="col-md-8">
<input type="submit" name="update" value="Update">
</div>
</div>
    </form>
</div>

```

```
</div>
</body>
</html>
```

### Step 6.3 : Create a stored procedure (sp\_update) for update a record

```
DROP PROCEDURE IF EXISTS `sp_update`$$
CREATE PROCEDURE `sp_update` (`fname` VARCHAR(120), `lname`
VARCHAR(120), `emailid` VARCHAR(150), `cntnumber` BIGINT(12), `address`
VARCHAR(255), `rid` INT(5)) BEGIN
update tblusers set
FirstName=fname,LastName=lname,EmailId=emailid,ContactNumber=cntnumber,A
ddress=address where id=rid;
END$$
```

### Step 6.4 : Code for update the record

```
<?php
// include database connection file
require_once'dbconfig.php';
if(isset($_POST['update']))
{
// Get the row id
$rid=intval($_GET['id']);
// Posted Values
$fname=$_POST['firstname'];
$lname=$_POST['lastname'];
$emailid=$_POST['emailid'];
$contactno=$_POST['contactno'];
$address=$_POST['address'];

// Store Procedure for Updation
$sql=mysqli_query($con,"call
sp_update('$fname','$lname','$emailid','$contactno','$address','$rid')")
;
// Mesage after updation
echo "<script>alert('Record Updated successfully');</script>";
// Code for redirection
echo "<script>window.location.href='index.php'</script>";
}
?>
```

### Note

Attach the screenshots with your Answer script.

.