STEPS:-

1. Create DB & table using php
   createdb.php

2. Connecting to php
   connect.php

3. Register new user
   reg.php
   insert.php

4. Login user
   login.php
   check.php

5. Resulting page
   welcome.php

6. Logout
   logout.php
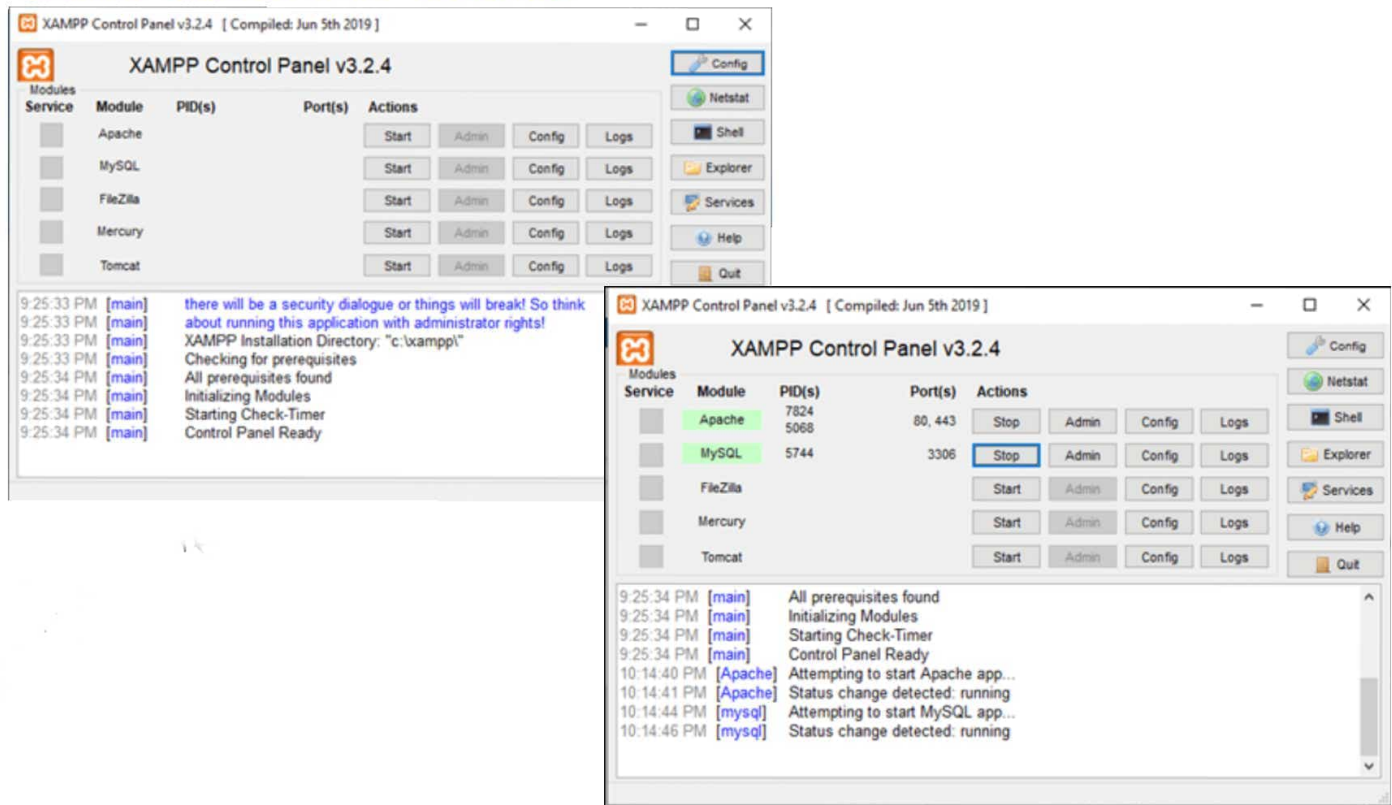
To run:- (in URL of chrome:-)

localhost/createdb.php
localhost/login.php (register new user)
localhost/login.php (login existing user)

for any basic management systems..

First, Start apache and mysql :-

in XAMPP,
open Xampp control panel
then click the Start.

for LAMPP, open terminal &
type the underlined in terminal :-

That is;

sudo chmod -R 777 /opt/lampp/htdocs
&
sudo /opt/lampp/lampp/start

① Create database & table using PHP.   (createdb.php) : (RUN)

```php
<?php
$servername = "localhost";
$username = "root";
$password = "";
$conn = mysqli_connect($servername, $username, $password);
if (!$conn)
{
    die("Connection failed: " . mysqli_error($conn));
}
else
{
    echo                "Connected successfully";
}

$sql = "CREATE DATABASE mcadb";
$retval = mysqli_query($conn, $sql);
if (!$retval)
{
    die("Couldnot create database:" . mysqli_error($conn));
}
else
{
    echo "Database mcadb created successfully \n";
}

mysqli_select_db($conn, 'mcadb');
```

```php
$sql2 = " CREATE TABLE studtable ( id int primary key NOT NULL AUTO_INCREMENT,
            username varchar (30) NOT NULL, password varchar (30) Not null,
email varchar(30) ntnull, name varchar(30) not null, course varchar (30) not null,
            mark int not null, ) " ;

$retval2 = mysqli_query ($conn, $sql2);

if ( ! $retval2)
{
    die (" Couldnot create table : " . mysqli_error ($conn) );
}
else
{
    echo " Table studtable created successfully ";
?>
```

② (Connect.php)

```php
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "mcadb";              // database to be used.
$conn = new mysqli($servername, $username, $password, $dbname);
if ($conn -> connect_error)
{
    die ("Connection failed :" . $conn -> connect_error);
}
?>
```

③ Register form   (reg.html)

```html
<html>
<head>
<title> Register </title>
</head>
<body align="center">
<h1> Registration Form </h1>
<form name="frm" action="insert.php" method="POST" onsubmit="return validate()">
Username: <input type="text" name="urname"> <br>
Name: <input type="text" name="rname"> <br>
Email: <input type="email" name="rmail"> <br>
Course: <input type="text" name="rcourse"> <br>
Mark: <input type="number" name="rmark"> <br>
Password: <input type="password" name="rpass"> <br>
<input type="submit" name="submit" value="Submit">
<input type="reset" name="reset" value="Reset">
</form>
```

```javascript
<script>
function validate() {
    var usrname = document.forms["frm"]["urname"].value;
    var name = document.forms["frm"]["rname"].value;
    var mail = document.forms["frm"]["mail"].value;
    var course = document.forms["frm"]["course"].value;
    var mark = document.forms["frm"]["mark"].value;
    var pass = document.forms["frm"]["pass"].value;
    var unameformat = /^[a-zA-Z0-9._-]$/;
    var nameformat = /^[a-zA-Z]$/;
    var mailformat = /^[a-zA-Z0-9._-]+@[a-zA-Z0-9._-]+\.[a-zA-Z]{2,}$/;
    var markformat = /^[0-9]$/;
    if (urname == null || urname == " ") {
        alert("Usrname cannot be empty");
        return false;
    }
    if (name == null || name == " ") {
        alert("Name cant be empty");
        return false;
    }
    else if (!(name.match(nameformat))) {
        alert("Invalid name format");
        return false;
    }
    if (mail == null || mail == " ") {
        alert("Mail canot be empty");
        return false;
    }
    else if (!(mail.match(mailformat))) {
        alert("Invalid mail format");
        return false;
    }
    if (course == null || course == " ") {
        alert("Course cant be empty");
        return false;
    }
    if (mark == null || mark == " ") {
        alert("Mark cant be empty");
        return false;
    }
    else if (!(mark.match(markformat))) {
        alert("Invalid mark format");
        return false;
```

```
if (pass == null || pass == "  ")
    alert ("Password can't be empty");
    return false;
}
else {
    ~~alert ("Register~~ alert ("Submitted successfully");
}
</script>
</body>
</html>
```

(4) Insert registered user (insert.php)

```php
<?php
include ("connect.php");

if ($_POST)
{

    $ussrname = $_POST['urname'];
    $name = $_POST['oname'];
    $email = $_POST['rmail'];
    $course = $_POST['rcourse'];
    $mark = $_POST['mark'];


    $sql =              "INSERT INTO studtable
            VALUES ('$ussrname', '$password', '$email', '$name',
                    '$course', '$mark')";
    $retval = mysqli_query ($conn, $sql);
    if (! $retval)
    {
        die ("Could not register try again:" . mysqli_error($conn));
    }
    else
    {
        echo "Registered successfully"
    }

?>
```

```php
<?.php
include ('connect.php');
session_start();
?>

<html>
<head>
<title> Login </title>
</head>
<body    align=" center">
<h1> Login Form </h1>
<form action= "        check.php" method= "POST">
Username: <input type="text" name= "uname"> <br>
Password : <input type="password" name=" pword"><br>
<input type=" submit" name="submit" value=" Submit">
</form>
<br>
<a   href=" path \reg.php "> Register New User </a>
</body>
</html>

<?php
if ($_GET)
{
    $msg = $_GET[ message ];
    echo "<br><br>" . $msg ;

}
?>
```

(6) Check/verify login user (check.php)

```php
<?php
include ('connect.php');
session_start();
if ($_POST)
{
    $uname = $_POST['uname'];
    $pword = $_POST['pword'];

    $sql = mysqli_query ($conn, "SELECT * FROM studtable WHERE
                         username= '$uname' OR password= '$pword')
    while ($row = mysqli_fetch_assoc($sql))
    {
        $dbuname= $row['username'];
        $dbpword= $row['password'];
    }
    if ( isset($dbuname) && isset ($dbpword) )
    {
        if ($dbuname== $uname  && $dbpword== $pword)
            $_SESSION ['loginuser'] == $dbuname;
```

```php
$_SESSION ['loginpass'] == $dbpword ;
header ("Location: welcome.php ");
}
else if ($dbuname == $uname && $dbpword!= $pword)
{
    header ("Location: login.php? message = Wrong password");
}
else if ($dbuname!= $uname && $dbpword == $pword)
{
    header ("Location: login.php? message = Wrong username");
}
else
{
    header ("Location: login.php? message = Invalid username or password");
}
}
}
?>
```

(7) Resulting page (welcome.php)

```php
<?php
    include ("connect.php");
    session_start();



    $uname= $_SESSION ['loginuser'];
    $pword= $_SESSION ['login pass'];
    $sql = mysqli_query ($conn, "SELECT * FROM studtable WHERE
                            username='$uname' OR password = '$pword');
?>
<html>
<head>
<title>
</head>
<body align="center">
<h1> Welcome user <?php echo $uname; ?> </h1><br>
<table border="1px solid black">

<?php
    while($row = mysqli_fetch_assoc ($sql))
    {
?>
    <tr>
        <th> Name </th>
        <?php echo" <td>". $row['name']."</td>"; ?>
    </tr>
    <tr>
        <th> Course </th>
        <?php echo "<td>". $row['course']. "</td>"; ?>
    </tr>
```

```
<tr>
    <th> Mark </th>
    <?php echo"<td>" . $row['mark'] . "</td>"; ?>
</tr>
<tr>
    <th> Email </th>
    <?php echo "<td>" . $row['email'] . "</td>"; ?>
</td>

<?php } ?>
</table>
        <br>

<form action = "logout.php" method = "post">
<input type= "submit"        name= "submit" value="Log out">
</form>
</body>
</html>
```
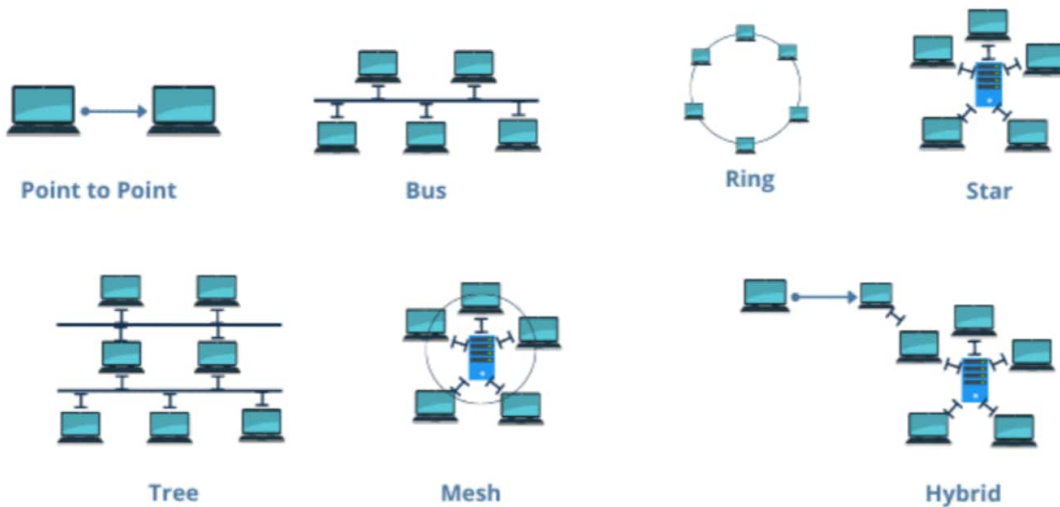
(8) Logout file — (logout.php)

```php
<? php
    session_start();
    session_unset();
    session_destroy();
    header("Location: login.php");
?>
```

for viva... (chodhikkuvanel..)

TYPES OF NETWORK TOPOLOGIES

Point to Point

Bus

Ring

Star

Tree

Mesh

Hybrid

TYPES OF NETWORK DEVICES

REPEATER

A repeater is a two-port network device that regenerates the signal over a network before it becomes weak or gets damaged.

NETWORK HUB

A network hub is a multiport repeater that connects multiple wires from different branches.

BRIDGE

A bridge is a device that joins any two networks or host segments together.

NETWORK SWITCH

Switches play a more important role than hubs. A switch is a multi-port device that enhances network efficiency.

MODEM

Modems are devices that transform digital signals into the form of analog signals that are of various frequencies

GATEWAY

As the name suggests, the gateway is a passage that interlinks two networks together.

ACCESS POINT

An AP or Access Point is a wireless appliance that operates on the OSI model's second layer. It can be used in two ways.

Mail Format

`/^ [a-zA-Z0-9._-]+@[a-zA-Z0-9._-]+\.[a-zA-Z]{2,4} $/`

Phone number format (consist 10 digits)

`/^ [0-9]{10} $/`

simple Password format (consist of minimum 8 charctrs)

`/^ [a-zA-Z0-9@@$!%*?&]{8, } /$`