Name:- Denvin Davis   **Roll No:-**07   **Batch:-** A

Experiment No:-5

Title: Server side scripting.

Part a) Use HTML form to accept two matrix from the user. Perform matrix multiplication using PHP and display the result on the screen.

Part b) Write a PHP program to accept electricity units consumed, consumer number and name from the user and calculate the total electricity bill according to the given condition:

For first 50 units Rs. 0.50/unit
For next 100 units Rs. 0.75/unit
For next 100 units Rs. 1.20/unit
For unit above 250 Rs. 1.50/unit
An additional surcharge of 20% is added to the bill.

Display the consumer number, name and the final electricity bill to be paid on the screen.

Objective:

To give a basic introduction of to PHP and dynamic programming on the server side. Students will understand Server side scripting and introduction to PHP

Outcome:

Creating a server side script using PHP, decisions, looping.

Code:-

Part a)

Matrix.php

```html
<!DOCTYPE html>
<html>
<head>
    <title>Matrix Multiplication</title>
</head>
<body>

<form action="result.php" method="POST">
    <h1>Matrix 1</h1>
```

```html
    <input type="number" name="m11">
    <input type="number" name="m12">
    <input type="number" name="m13">
    <br><br>
    <input type="number" name="m21">
    <input type="number" name="m22">
    <input type="number" name="m23">
    <br><br>
    <input type="number" name="m31">
    <input type="number" name="m32">
    <input type="number" name="m33">

    <h1>Matrix 2</h1>
    <input type="number" name="n11">
    <input type="number" name="n12">
    <input type="number" name="n13">
    <br><br>
    <input type="number" name="n21">
    <input type="number" name="n22">
    <input type="number" name="n23">
    <br><br>
    <input type="number" name="n31">
    <input type="number" name="n32">
    <input type="number" name="n33">

    <input type="submit" name="hsp">

</form>


</body>
</html>
```

Result.php

```php
<html>
<pre>
<?php
if ($_POST['hsp']) {
$de3t11=$_POST['m11']; $de3t12=$_POST['m12'];  $de3t13=$_POST['m13'];
$de3t21=$_POST['m21'];  $de3t22=$_POST['m22'];  $de3t23=$_POST['m23'];
$de3t31=$_POST['m31'];  $de3t32=$_POST['m32'];  $de3t33=$_POST['m33'];

$de2t11=$_POST['n11']; $de2t12=$_POST['n12'];  $de2t13=$_POST['n13'];
$de2t21=$_POST['n21'];  $de2t22=$_POST['n22'];  $de2t23=$_POST['n23'];
```

```php
$de2t31=$_POST['n31'];  $de2t32=$_POST['n32'];  $de2t33=$_POST['n33'];

//calculate matrix
$m3m11=(($de3t11*$de2t11)+($de3t11*$de2t21)+($de3t11*$de2t31));
$m3m12=(($de3t12*$de2t11)+($de3t12*$de2t21)+($de3t12*$de2t31));
$m3m13=(($de3t13*$de2t11)+($de3t13*$de2t21)+($de3t13*$de2t31));

$m3m21=(($de3t21*$de2t12)+($de3t21*$de2t22)+($de3t21*$de2t32));
$m3m22=(($de3t22*$de2t12)+($de3t22*$de2t22)+($de3t22*$de2t32));
$m3m23=(($de3t23*$de2t12)+($de3t23*$de2t22)+($de3t23*$de2t32));

$m3m31=(($de3t31*$de2t13)+($de3t31*$de2t23)+($de3t31*$de2t33));
$m3m32=(($de3t32*$de2t13)+($de3t32*$de2t23)+($de3t32*$de2t33));
$m3m33=(($de3t33*$de2t13)+($de3t33*$de2t23)+($de3t33*$de2t33));

}
 ?>
</pre>
<head><title>Matrix Multiplication</title></head>
<body>
<?php
//show on screen
echo "Matrix 1";
echo "<br>";
echo $de3t11 ." ". $de3t12. " ". $de3t13;
echo "<br>";
echo $de3t21 ." ". $de3t22. " ". $de3t23;
echo "<br>";
echo $de3t31 ." ". $de3t32. " ". $de3t33;
echo "<br>";
echo "<br>";
echo "Matrix 2";
echo "<br>";
echo $de2t11 ." ". $de2t12. " ". $de2t13;
echo "<br>";
echo $de2t21 ." ". $de2t22. " ". $de2t23;
echo "<br>";
echo $de2t31 ." ". $de2t32. " ". $de2t33;
echo "<br>";
echo "<br>";
echo "Result";
echo "<br>";
echo $m3m11 ." ". $m3m12. " ". $m3m13;
echo "<br>";
echo $m3m21 ." ". $m3m22. " ". $m3m23;
```

```
echo "<br>";
echo $m3m31 ." ". $m3m32. " ". $m3m33;
echo "<br>";
?>
</body>
</html>
```

Part b)

Elec.php

```php
<?php
?>
<html>
<head>
    <title> Electricty Bill </title>
</head>
<body>
<center><h1>Electricty Bill </h1>
<table style = "border:1px solid black;" width="40%">
<center>
<form  name="f1" action="Receipt.php"method="post">
<tr>
<th colspan="2" style="text-align:left">Electricity Bill</th>

<tr>
   <td width="30%">Consumer Number</td>
   <td> <input type="text" name="consumer_id" value=""></td>
</tr>

<tr>
   <td width="30%">Consumer Name</td>
   <td> <input type="text" name="Consumer_name" value=""></td>
</tr>

<tr>
   <td width="30%">Units Consumed</td>
   <td> <input type="text" name="Units" value=""></td>
</tr>

<td colspan=2><input type="submit" value="submit">
</td>

</tr>
```

```
</form>
</table>
</body>
</html>
```

Receipt.php

```php
<html>
<pre>
<?php
$Consumer_id=$_POST['consumer_id'];
$Consumer_name= $_POST ['Consumer_name'];
$Units= $_POST['Units'];
?>
</pre>
<head>
    <title> Electricty Bill Receipt</title>
</head>
<body>
<center><h1>Electricty Bill Receipt</h1>
<table style = "border:1px solid black;" width="40%">
<center>
<th colspan="2" style="text-align:left"> </th>
<tr>
    <td width="30%">Consumer Number</td>
    <td> <?php echo $Consumer_id; ?></td>
</tr>
<tr>
    <td width="30%">Consumer Name</td>
    <td> <?php echo $Consumer_name; ?></td>
</tr>
<tr>
    <td width="30%">Units Consumed</td>
    <td><?php echo $Units; ?> </td>
</tr>
<br>
<br>
<tr>
<td ><h4>Total Amount</h4></td>
```

```php
<td><h4>Rs<?php
  if($Units<=50){
   $total= $Units*0.5;
   $total=$total+$total*0.2;
  }
  if($Units>50 and $Units<=150){
   $total= 50*0.5+($Units-50)*0.75;
   $total=$total+$total*0.2;
  }
  if($Units>150 and $Units<=250){
   $total= 50*0.5+100*0.75+($Units-150)*1.2;
   $total=$total+$total*0.2;
  }
  if($Units>250){
   $total=50*0.5+100*0.75+100*1.2+($Units-250)*1.5;
   $total=$total+$total*0.2;
  }
  echo " $total"; ?></h4>
</td>
</tr>
</form>
</table>
</body>
</html>
```
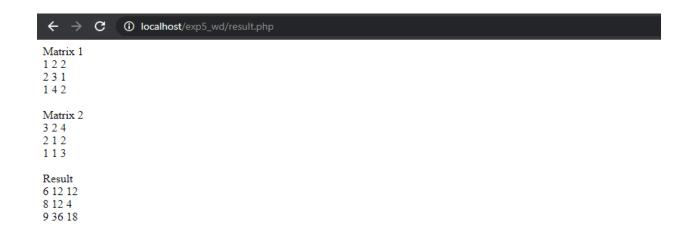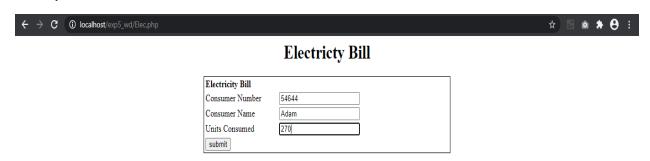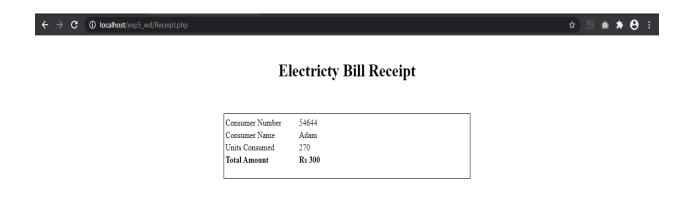
Output Screenshots:-

Part a)

localhost/exp5_wd/result.php

Matrix 1
1 2 2
2 3 1
1 4 2

Matrix 2
3 2 4
2 1 2
1 1 3

Result
6 12 12
8 12 4
9 36 18

Part b)

localhost/exp5_wd/Elec.php

Electricty Bill

Electricity Bill	
Consumer Number	54644
Consumer Name	Adam
Units Consumed	270
submit	

Conclusion:- In this experiment, we have successfully written programs for matrix multiplication and electricity bill by understanding and implementing the basic concepts of PHP.

References:-

https://www.w3schools.com/php/default.asp

https://www.tutorialspoint.com/php/index.htm