Vidyavardhaka Sangha®, Mysore
VIDYAVARDHAKA COLLEGE OF ENGINEERING
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(Approved by AICTE, New Delhi & Government of Karnataka)
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WEB TECHNOLOGY LABORATORY WITH MINI PROJECT [17CSL77]

DEPARTMENT OF ISE

VIDYAVARDHAKA COLLEGE OF ENGINEERING
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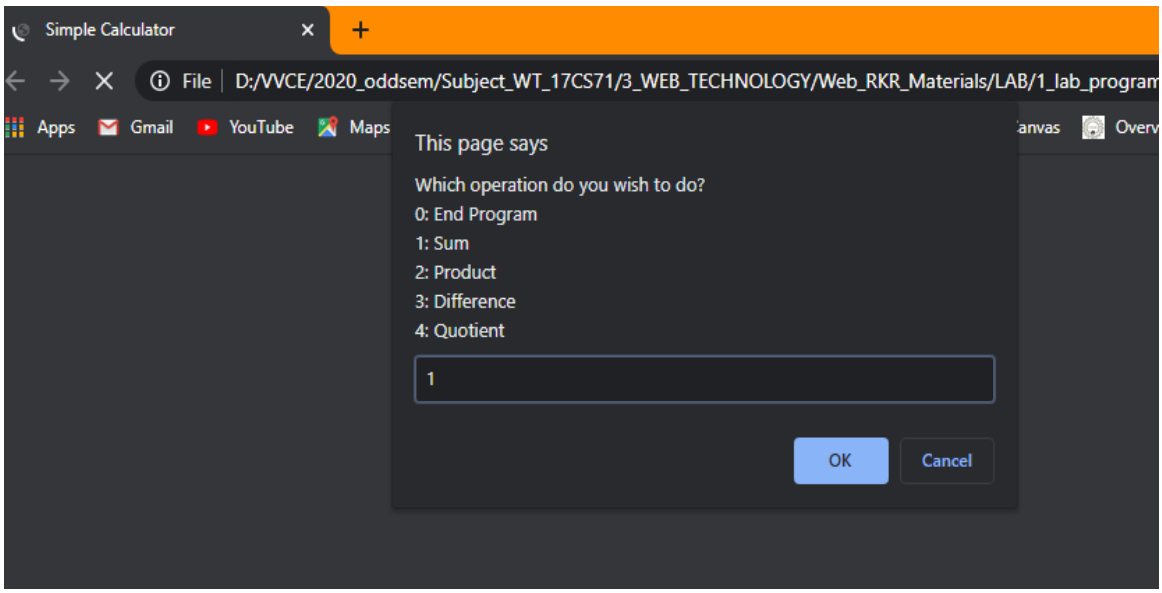
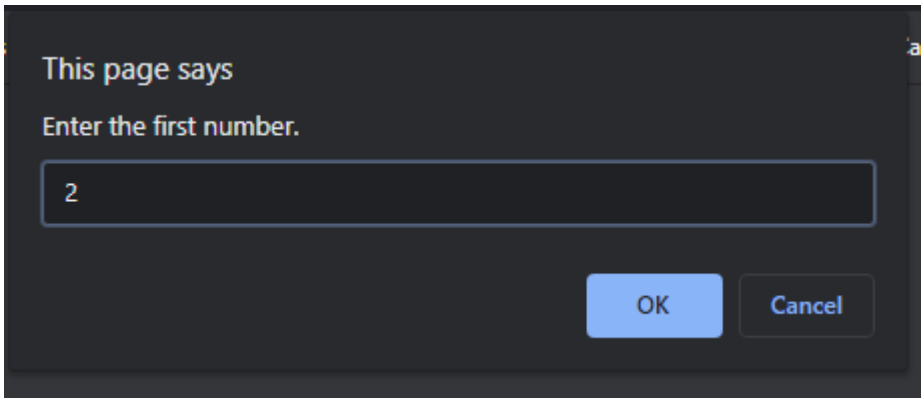
1. Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.

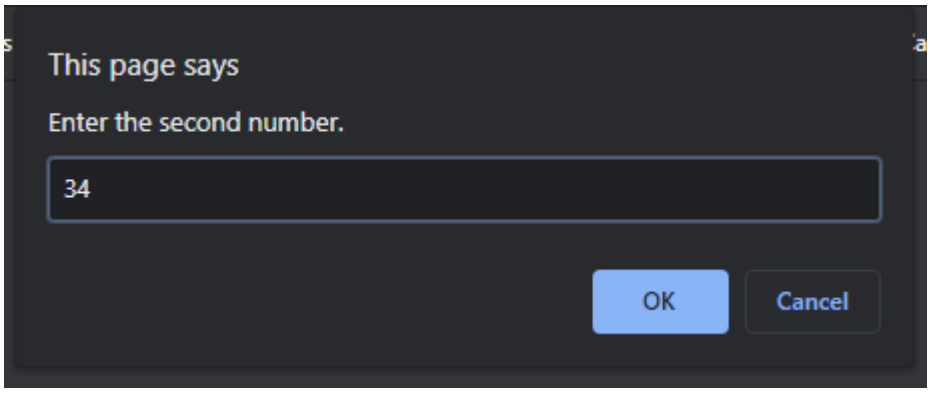
Program1.html

```
<!DOCTYPE html>
<html>
<head>
<title>Simple Calculator</title>
</head>
<body>
<!-- comment line: script starts from here -->
<script type="text/javascript">
operation=-1;
while (operation != 0)
{
 var operation=prompt("Which operation do you wish to do?\n0: End Program\n1: Sum\n2: Product\n3: Difference\n4: Quotient");
 if (operation>=1 && operation<=4)
 {
  var num1=parseFloat(prompt("Enter the first number."," "));
  var num2=parseFloat(prompt("Enter the second number."," "));
  if (operation==1) alert("The Sum is "+(num1+num2));
  if (operation==2) alert("The Product is "+(num1*num2));
  if (operation==3) alert("The Difference is "+(num1-num2));
  if (operation==4) alert("The Quotient is "+(num1/num2));
 }
 else
 {
  if (operation!=0) alert("That wasn't one of the options");
 }
}
alert(" SCRIPT TERMINATED!... ");
</script>
</body>
</html>
```

Output:


Simple Calculator
File D:/VVCE/2020_oddsem/Subject_WT_17CS71/3_WEB_TECHNOLOGY/Web_RKR_Materials/LAB/1_lab_program
Apps
Gmail
YouTube
Maps
This page says
Which operation do you wish to do?
0: End Program
1: Sum
2: Product
3: Difference
4: Quotient
1
OK
Cancel


This page says
Enter the first number.
2
OK
Cancel


This page says
Enter the second number.
34
OK
Cancel


This page says
The Sum is 36
OK

2. Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.

Program2.html

```
<!DOCTYPE html>
<html>
<!-- header -->
<head>
<title>Squares and cubes</title>
<!-- style sheet -->
<style>
th{
   background-color: #00FF00;
}
</style>
</head>
<!-- body -->
<body background-color:ivory>
<h1 style="border:3px solid DodgerBlue; color:brown;"
align=center>SQUARES AND CUBES OF NUMBERS FROM 0 TO 10 </h1>
<hr>
<br>
<!-- script -->
<script type="text/javascript">
document.write( "<table border=1 align=center> <tr> <th>Numbers
</th><th>Square </th> <th>Cube </th> </tr>" );
for(var n=0; n<=10; n++)
{
 document.write( "<tr><td align=center>" + n + "</td><td align=center>" +
n*n + "</td><td align=center>" + n*n*n + "</td></tr>" );
}
document.write( "</table>" );
</script>
</body>
<!-- end of body -->
</html>
```

Output:

SQUARES AND CUBES OF NUMBERS FROM 0 TO 10

Numbers	Square	Cube
0	0	0
1	1	1
2	4	8
3	9	27
4	16	64
5	25	125
6	36	216
7	49	343
8	64	512
9	81	729
10	100	1000

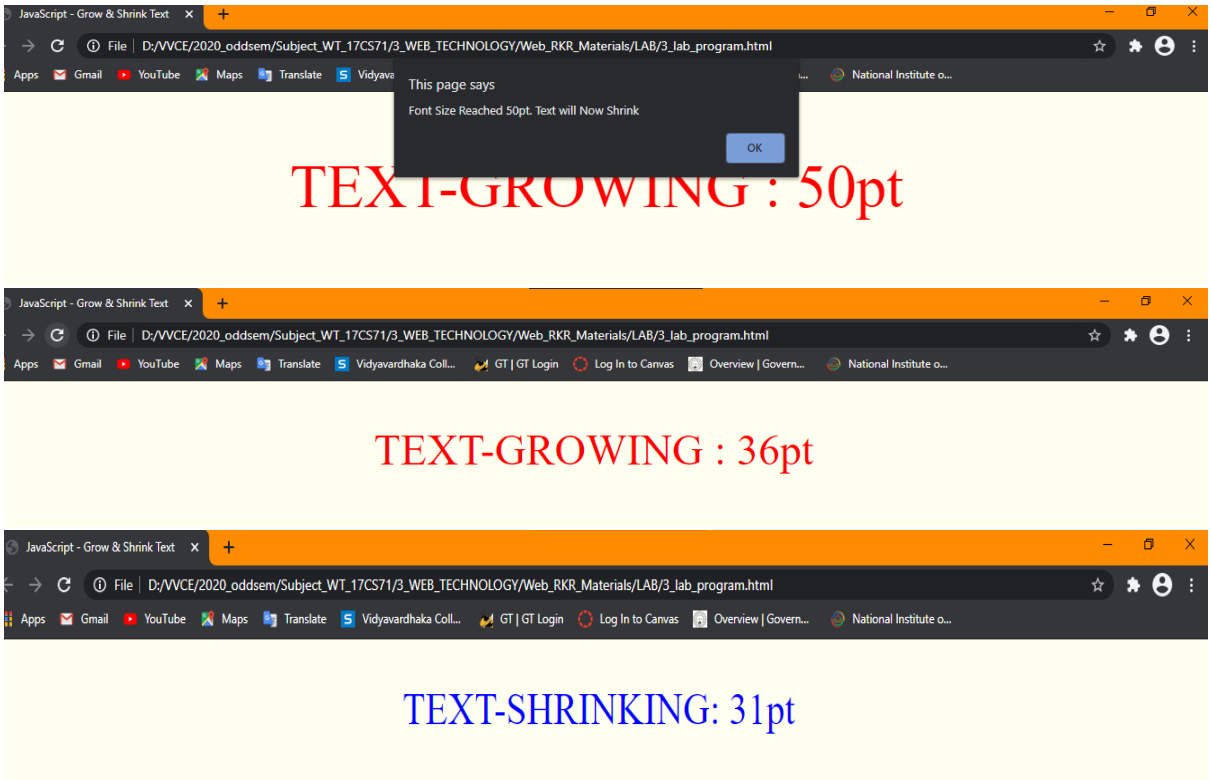
3. Write a JavaScript code that displays text “TEXT-GROWING” with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays “TEXT-SHRINKING” in BLUE color. Then the font size decreases to 5pt.

Program3.html

```
<!DOCTYPE html>
<html>
<head>
<title>JavaScript - Grow & Shrink Text</title>
<script language = "JavaScript">
var c = 0, t1;
function start( )
{
 t1 = window.setInterval("incr()", 100);
}
function incr( )
{
 c = c + 1;
 t.innerHTML = "TEXT-GROWING : " + c + "pt";
 t.style.fontSize = c + "pt";

 if (c > 50)
  {
   window.clearTimeout(t1);
   alert("Font Size Reached 50pt. Text will Now Shrink");
   t1 = window.setInterval("decr()", 100);
  }
 t.style.color = "red";
}
function decr( )
{
 c = c - 1;
 t.innerHTML = "TEXT-SHRINKING: " + c + "pt";
 t.style.fontSize = c + "pt";

 if (c == 5)
  {
   window.clearTimeout(t1);
```

```
  }
 t.style.color = "blue";
}
</script>
</head>
<body bgcolor="ivory" onload="start()">
<center>
<p id="t"> </p>
</center>
</body>
</html>
```

Output:



4. Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the following problems:
   a. Parameter: A string
   b. Output: The position in the string of the left-most vowel
   c. Parameter: A number
   d. Output: The number with its digits in the reverse order

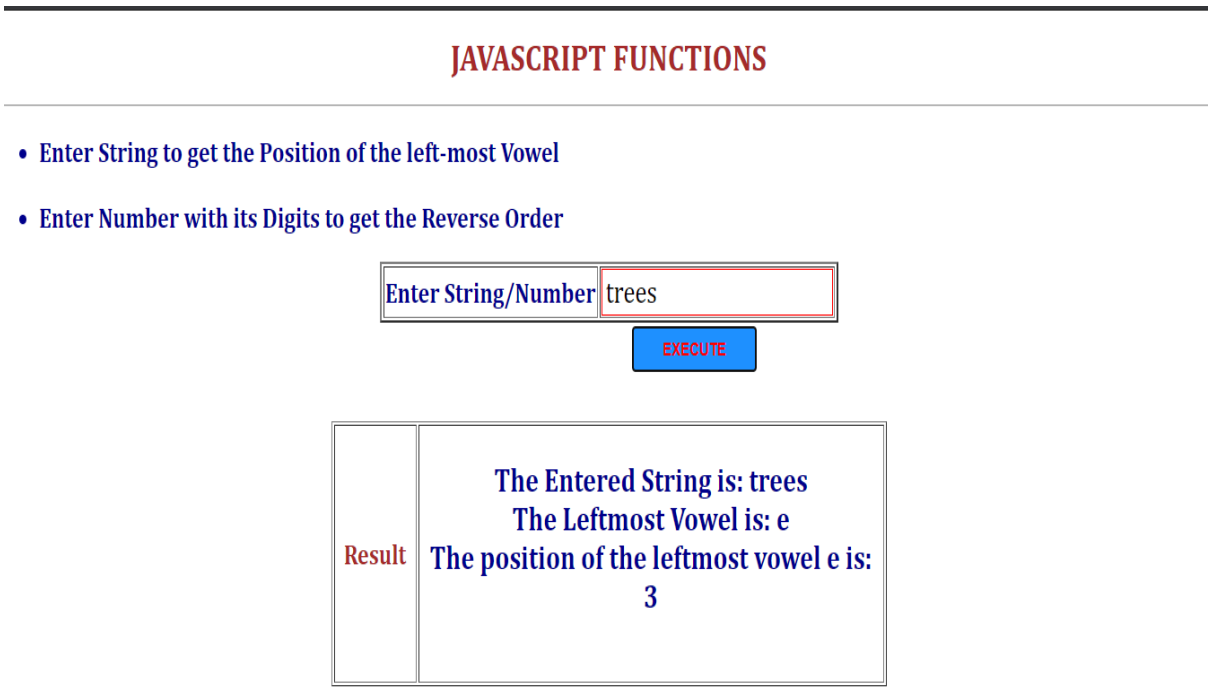
Program4.html

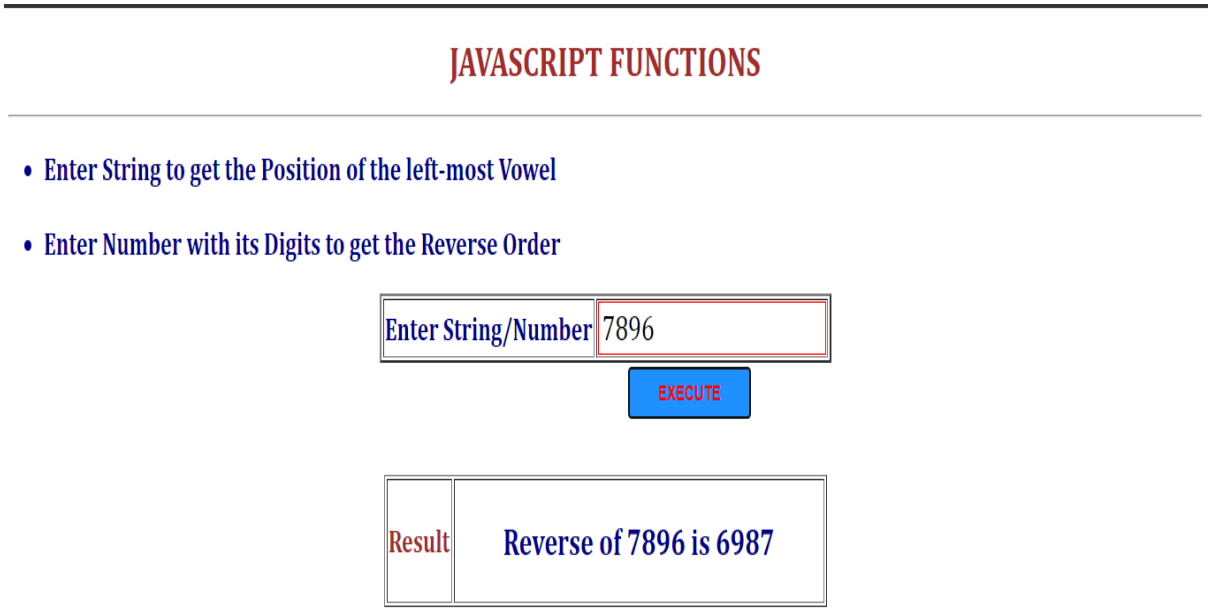
```
<!DOCTYPE html>
<html>
<head>
<title>JavaScript Functions</title>
<style>
#tb {
    padding: 4px 22px 4px 4px;
    border:1px solid red;
    width:230px;
    height:30px;
    font:20pt cambria;
   }
.wrapper {
    text-align: center;
   }
.button {
    position: absolute;
    top: 40%;
          left: 52%;
          display: block;
          width: 10%;
          border: none;
          background-color: dodgerblue;
          color: white;
          padding: 10px 28px;
          font-size: 15px;
          cursor: pointer;
          text-align: center;
          margin-top: 20px;
   }
</style>
```

```
</head>
<body>
<h1 style="color: brown; font-family: cambria;" align = center> JAVASCRIPT FUNCTIONS </h1>

<hr>
<h2 style="color: darkblue; font-family: cambria;">
<ul>
        <li> Enter String to get the Position of the left-most Vowel </li>
        <br>
        <li> Enter Number with its Digits to get the Reverse Order </li>
</ul>
</hr>

<table border = 2 align=center>
        <tr>
            <th align=center> Enter String/Number </th>
            <th align=center> <input type=text id="tb" /> </th>
   </tr>
</table>

<div class="wrapper">
        <button class="button" id="str" onclick = "myFunction((document.getElementById('tb').value))" style="background-color:dodgerblue; color:red"> <b>EXECUTE</b> </button>
</div>
<br>
<br>
<br>
<table border=1 align=center>
        <tr>
        <th style="font-size: 30; color: brown; width=25%;"> Result </th>
        <th width="85%"> <div id="result"> </div> </th>
        </tr>
</table>
<script>
function myFunction(str)
{
        if (!isNaN(str))
        {
```

```
                var num = parseInt(str);
                //The parseInt() function parses a string and returns an integer.
                var rev = 0, rem = 0;
                while (num > 0)
                {
                        rem = parseInt(num % 10);
                        rev = rev * 10 + rem;
                        num = parseInt(num / 10);
                }
                document.getElementById("result").innerHTML = "<h3>Reverse
of " + str + " is " + rev + "</h3>";
        }
        else
        {
                var text = "<h3>The Entered String is: " + str + "<br/>";
                for (var i = 0; i < str.length; i++)
                {
                        if (str.charAt(i) == 'a' || str.charAt(i) == 'e' || str.charAt(i)
== 'i' || str.charAt(i) == 'o' || str.charAt(i) == 'u' || str.charAt(i) == 'A' ||
str.charAt(i) == 'E' || str.charAt(i) == 'I' || str.charAt(i) == 'O'|| str.charAt(i) ==
'U')
                        {
                          text += "The Leftmost Vowel is: " + str.charAt(i) + "<br/>";
                          var pos = i + 1;
                          text += "The position of the leftmost vowel " +
str.charAt(i) + " is: " + pos + "</h3><br/>";
                          document.getElementById("result").innerHTML = text;
                          exit;
                        }
                }
                text += "The Entered String has no Vowels</h3>";
                document.getElementById("result").innerHTML = text;
        }
}
</script>
</body>
</html>
```

Output:


JAVASCRIPT FUNCTIONS
• Enter String to get the Position of the left-most Vowel
• Enter Number with its Digits to get the Reverse Order
Enter String/Number
trees
EXECUTE
Result
The Entered String is: trees
The Leftmost Vowel is: e
The position of the leftmost vowel e is: 3


JAVASCRIPT FUNCTIONS
• Enter String to get the Position of the left-most Vowel
• Enter Number with its Digits to get the Reverse Order
Enter String/Number
7896
EXECUTE
Result
Reverse of 7896 is 6987

5. Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Branch, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the document.

studentinfo.xml

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE student_information SYSTEM "stud.dtd">
<?xml-stylesheet type="text/css" href="stud.css"?>

<information>
<vtu>
<usn> 4VV18IS001 </usn>
<name> Ram </name>
<college> VVCE </college>
<branch> ISE </branch>
<yoj> 2018 </yoj>
<email> ram@gmail.com </email>
</vtu>

<vtu>
<usn> 4VV18IS002 </usn>
<name> Harsha </name>
<college> VVCE </college>
<branch> ISE </branch>
<yoj> 2018 </yoj>
<email> harsha@gmail.com </email>
</vtu>

<vtu>
<usn> 4VV18IS003 </usn>
<name> Siri </name>
<college> VVCE </college>
<branch> ISE </branch>
<yoj> 2018 </yoj>
<email> siri@gmail.com </email>
</vtu>
</information>
```

stud.dtd

```
<?xml version="1.0"?>
<!ELEMENT information (vtu+)>
<!ELEMENT usn (#PCDATA)>
<!ELEMENT name (#PCDATA)>
<!ELEMENT college (#PCDATA)>
<!ELEMENT branch (#PCDATA)>
<!ELEMENT yoj (#PCDATA)>
<!ELEMENT email (#PCDATA)>
```

stud.css

```
usn {display:block;margin-top:20px;margin-left:20px;color:blue;font-
size:18pt;}
name {display:block;margin-left:20px;color:red;font-size:16pt;}
college {display:block;margin-left:20px;font-size:14pt;}
branch {display:block;margin-left:20px;font-size:14pt;}
yoj {display:block;margin-left:20px;font-size:14pt;}
email {display:block;margin-left:20px;font-size:12pt;}
```

Output:

4VV18IS001
Ram
VVCE
ISE
2018
ram@gmail.com

4VV18IS002
Harsha
VVCE
ISE
2018
harsha@gmail.com

4VV18IS003
Siri
VVCE
ISE
2018
siri@gmail.com

6. Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.

Program6.php

```
<!DOCTYPE html>
<html>
<head>
<title> php running localy </title>
</head>
<body>
<h1> Welcome to my page </h1>

<?php

  $fp = fopen("counterlog.txt", "r");
  $count = fread($fp, 10);  //arguments: file descriptor & max no of bytes to
read
  fclose($fp);
  $count = $count + 1;
  echo "<p>Page views:" . $count . "</p>";
  $fp = fopen("counterlog.txt", "w");
  fwrite($fp, $count);
  fclose($fp);

 ?>

 </body>
 </html>
```

Execution Steps:

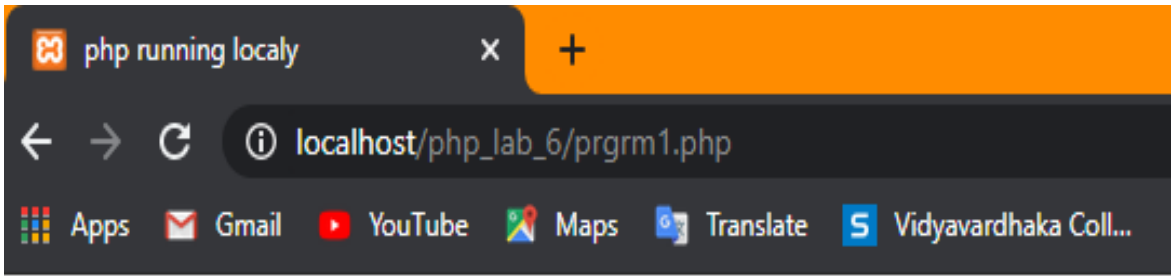
1. Save the file to **"C:\xampp\htdocs\php\"** with **.php** file extension. (Ex: program_6.php)

2. Create a **"counterlog.txt"** file in the **php file location**, open the file and write **"0"** and save the file.

3. Open **XAMPP** in the task bar / control panel. Click on Apache and start the server.

4. Open up any Web Browser, and type the following address in the address bar : **http://localhost/php_lab_6/prgrm1.php**

Output:



Welcome to my page

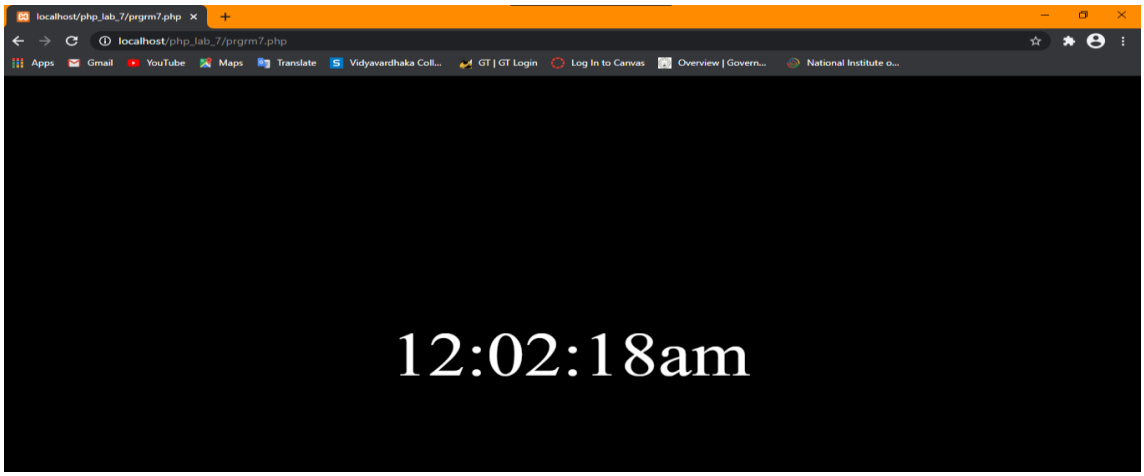
Page views:72

7. Write a PHP program to display a digital clock which displays the current time of the server.

Program7.php

```
<!DOCTYPE HTML>
<html>
<head>
<meta http-equiv="refresh" content="1"/>
<style>
p {
color:white;
font-size:90px;
position: absolute;
top: 50%;
left: 50%;
transform: translate(-50%, -50%);
}
body{background-color:black;}
</style>
</head>
<body>
<p>
<?php date_default_timezone_set("Asia/kolkata");
echo date("h:i:sa");?>
</p>
</body>
</html>
```

Output:



8. Write the PHP programs to do the following:
   a. Implement simple calculator operations.
   b. Find the transpose of a matrix.
   c. Multiplication of two matrices.
   d. Addition of two matrices.

Program8a.php

```
<?php
   if (isset($_POST['res']))
  {
     $result = $_POST['display'];
     $result = eval('return '.$result.';');
   }
?>
<html>
<head>
<title> Simple Calculator Using PHP - Web lab Program 8a</title>
<style>
input {
   background-color: #80ced6;
   border: none;
   color: black;
   width: 100%;
   padding: 15px 32px;
   text-align: center;
   text-decoration: none;
   display: inline-block;
   font-size: 15px;
}
</style>
</head>
 <body>
<center>
<h2> Calculator Using PHP</h2>
    <form name="calculator"  method="post">
      <table>
        <tr>
          <td colspan="4">
```

```
            <input type="text" name="display" value="<?php
if(isset($result)){ echo $result;}?>"  >
          </td>
        </tr>
        <tr>
          <td><input type="button" value="1"
onclick="calculator.display.value += '1'"></td>
          <td><input type="button" value="2"
onclick="calculator.display.value += '2'"></td>
          <td><input type="button" value="3"
onclick="calculator.display.value += '3'"></td>
          <td><input type="button" value="+"
onclick="calculator.display.value += '+'"></td>
        </tr>
        <tr>
          <td><input type="button" value="4"
onclick="calculator.display.value += '4'"></td>
          <td><input type="button" value="5"
onclick="calculator.display.value += '5'"></td>
          <td><input type="button" value="6"
onclick="calculator.display.value += '6'"></td>
          <td><input type="button" value="-"
onclick="calculator.display.value += '-'"></td>
        </tr>
        <tr>
          <td><input type="button" value="7"
onclick="calculator.display.value += '7'"></td>
          <td><input type="button" value="8"
onclick="calculator.display.value += '8'"></td>
          <td><input type="button" value="9"
onclick="calculator.display.value += '9'"></td>
          <td><input type="button" value="x"
onclick="calculator.display.value += '*'"></td>
        </tr>
        <tr>
          <td><input type="button" value="c"
onclick="calculator.display.value = ''"></td>
          <td><input type="button" value="0"
onclick="calculator.display.value += '0'"></td>
          <td><input type="submit" value="=" name="res"></td>
```

```
          <td><input type="button" value="/"
onclick="calculator.display.value += '/'"></td>
        </tr>
      </table>
    </form>
  </center>
  </body>
</html>
```

Program8b.php

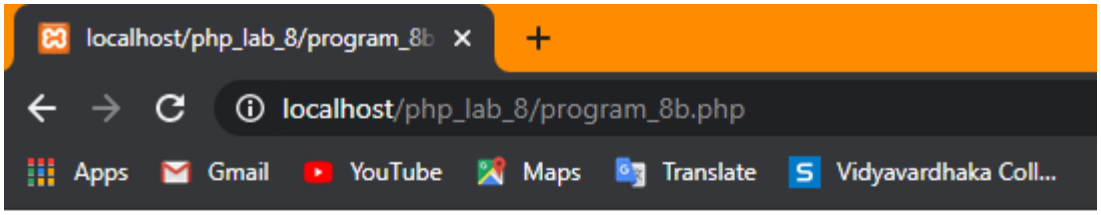
```
<?php
$a = array(array(1,2,3),array(4,5,6),array(7,8,9));
$b = array(array(7,8,9),array(4,5,6),array(1,2,3));
$m=count($a);
$n=count($a[2]);
$p=count($b);
$q=count($b[2]);
echo "the first matrix :"."<br/>";
for ($row = 0; $row < $m; $row++) {
for ($col = 0; $col < $n; $col++)
echo " ".$a[$row][$col];
echo "<br/>";
}
echo "the second matrix :"."<br/>";
for ($row = 0; $row < $p; $row++) {
for ($col = 0; $col < $q; $col++)
echo " ".$b[$row][$col];
echo "<br/>";
}
echo "the transpose for the first matrix is:"."<br/>";
for ($row = 0; $row < $m; $row++) {
for ($col = 0; $col < $n; $col++)
echo " ".$a[$col][$row];
echo "<br/>";
}
if(($m===$p) and ($n===$q)) {
echo "the addition of matrices is:"."<br/>";
for ($row = 0; $row < 3; $row++) {
for ($col = 0; $col < 3; $col++)
```

```
echo " ".$a[$row][$col]+$b[$row][$col]." ";
echo "<br/>";
}
}
if($n===$p){
echo " The multiplication of matrices: <br/>";
$result=array();
for ($i=0; $i < $m; $i++) {
for($j=0; $j < $q; $j++){
$result[$i][$j] = 0;
for($k=0; $k < $n; $k++)
$result[$i][$j] += $a[$i][$k] * $b[$k][$j];
}
}
for ($row = 0; $row < $m; $row++) {
for ($col = 0; $col < $q; $col++)
echo " ".$result[$row][$col];
echo "<br/>";
}
}
?>
```

Output:

Calculator Using PHP

5*9			
1	2	3	+
4	5	6	-
7	8	9	x
c	0	=	/



the first matrix :
1 2 3
4 5 6
7 8 9
the second matrix :
7 8 9
4 5 6
1 2 3
the transpose for the first matrix is:
1 4 7
2 5 8
3 6 9
the addition of matrices is:
8 10 12
8 10 12
8 10 12
The multiplication of matrices:
18 24 30
54 69 84
90 114 138

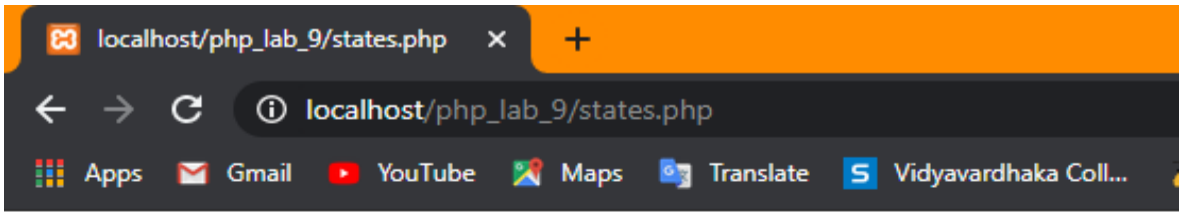
9. Write a PHP program named states.py that declares a variable states with value "**Mississippi Alabama Texas Massachusetts Kansas**". write a PHP program that does the following:
   a. Search for a word in variable states that ends in **xas**. Store this word in element 0 of a list named states List.
   b. Search for a word in states that begins with **k** and ends in **s**. Perform a case-insensitive comparison. [Note: Passing re.Ias a second parameter to method compile performs a case-insensitive comparison.] Store this word in element 1 of states List.
   c. Search for a word in states that begins with **M** and ends in **s**. Store this word in element 2 of the list.
   d. Search for a word in states that ends in **a**. Store this word in element 3 of the list.

Program9.php

```
<?php

$allTheStates = "Mississippi Alabama Texas Massachusetts Kansas";
$statesArray = [];
$states1 = explode(' ', $allTheStates);
$i = 0;
//states that ends in xas
foreach ($states1 as $state)
{
 if (preg_match('/xas$/', ($state)))
 {
  $statesArray[$i] = ($state);
  $i = $i + 1;
  echo "<br/>";
  echo " \n The States that ends in xas:" . $state;
 }
}
//states that begins with k and ends in s
foreach ($states1 as $state)
{
 if (preg_match('/^k.*s$/i', ($state)))
 {
  $statesArray[$i] = ($state);
  $i = $i + 1;
```

```
  echo "<br/>";
  print " \n The states that begins with k and ends in s:" . $state;
 }
}
//states that begins with M and ends in s
foreach($states1 as $state)
{
 if (preg_match('/^M.*s$/', ($state)))
 {
  $statesArray[$i] = ($state);
  $i = $i + 1;
  echo "<br/>";
  echo " \n The states that begins with M and ends in s:" . $state;
 }
}
//states that ends in a
foreach($states1 as $state)
{
  if (preg_match('/a$/', ($state)))
  {
   $statesArray[$i] = ($state);
   $i = $i + 1;
   echo "<br/>";
   echo " \n The states that ends in a:" . $state;
  }
}
echo "<hr>";
foreach ($statesArray as $element => $value)
{
 echo "<br/>";
 echo($value . " is stored in the element " . $element);
}
?>
```

Output:



The States that ends in xas:Texas
The states that begins with k and ends in s:Kansas
The states that begins with M and ends in s:Massachusetts
The states that ends in a:Alabama

Texas is stored in the element 0
Kansas is stored in the element 1
Massachusetts is stored in the element 2
Alabama is stored in the element 3

10. Write a PHP program to sort the student records which are stored in the database using selection sort.

```
<html>
<head>
<style>
table, td, th
{
border: 1px solid black;
width: 33%;
text-align: center;
border-collapse:collapse;
background-color:lightblue;
}
table { margin: auto; }
</style>
</head>
<body>
<?php
$serverNAME = "localhost";
$userNAME = "root";
```

```
$password = "";
$dbNAME = "wtlab";
$a=[];
// Create connection
// Opens a new connection to the MySQL server
$conn = mysqli_connect($serverNAME, $userNAME, $password, $dbNAME);
// Check connection and return an error description from the last connection error, if any
if ($conn->connect_error)
die("Connection failed: " . $conn->connect_error);
$sql = "SELECT * FROM students";
// performs a query against the database
$result = $conn->query($sql);
echo "<br>";
echo "<center> BEFORE SORTING </center>";
echo "<table border='2'>";
echo "<tr>";
echo "<th>USN</th><th>NAME</th><th>SEM</th></tr>";
if ($result->num_rows> 0)
{
// output data of each row and fetches a result row as an associative array
while($row = $result->fetch_assoc()){
echo "<tr>";
echo "<td>". $row["USN"]."</td>";
echo "<td>". $row["NAME"]."</td>";
echo "<td>". $row["SEM"]."</td></tr>";
array_push($a,$row["USN"]);
}
}
else
echo "Table is Empty";
echo "</table>";
$n=count($a);
$b=$a;
for ( $i = 0 ; $i< ($n - 1) ; $i++ )
{
$pos= $i;
for ( $j = $i + 1 ; $j < $n ; $j++ ) {
if ( $a[$pos] > $a[$j] )
$pos= $j;
```

```
}
if ( $pos!= $i ) {
$temp=$a[$i];
$a[$i] = $a[$pos];
$a[$pos] = $temp;
}
}
$c=[];
$d=[];
$result = $conn->query($sql);
if ($result->num_rows> 0)      // output data of each row
{
while($row = $result->fetch_assoc()) {
for($i=0;$i<$n;$i++) {
if($row["USN"]== $a[$i]) {
$c[$i]=$row["NAME"];
$d[$i]=$row["SEM"];
}
}
}
}
echo "<br>";
echo "<center> AFTER SORTING <center>";
echo "<table border='2'>";
echo "<tr>";
echo "<th>USN</th><th>NAME</th><th>SEM</th></tr>";
for($i=0;$i<$n;$i++) {
echo "<tr>";
echo "<td>". $a[$i]."</td>";
echo "<td>". $c[$i]."</td>";
echo "<td>". $d[$i]."</td></tr>";
}
echo "</table>";
$conn->close();
?>
</body>
</html>
```

Output:

BEFORE SORTING

USN	NAME	SEM
4VV17IS06	Arun	7sem
4VV17IS03	Bhargav	7sem
4VV17IS01	Harish	7sem
4VV17IS02	Kiran	7sem
4VV17IS05	Raju	7sem

AFTER SORTING

USN	NAME	SEM
4VV17IS01	Harish	7sem
4VV17IS02	Kiran	7sem
4VV17IS03	Bhargav	7sem
4VV17IS05	Raju	7sem
4VV17IS06	Arun	7sem