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

```
<html>
    <title>SIMPLE CALCULATOR</title>
    <style>
        input{ width:100%; padding:30px; } input:hover{background: silver;}
    </style>
    <body>
        <div align="center">
        <h2>SIMPLE CALCULATOR</h2>
        <script type="text/javascript">
            symbols = ['7','8','9','+','4','5','6','-','1','2','3','*','c','0','=','/']
            x = '<td> <input type="button" value="'
            document.write('<form name="cal"><table><tr><td colspan="8"> <input type="text" name="in"></td></tr><tr>');
            for (var i = 0; i<16; i++) {
                if(i==12){document.write('<td> <input type="reset" value="c" ></td>'); continue ;}
                if(i==14){document.write('<td><input type="button" value="=" onclick="cal.in.value =eval(cal.in.value)"></td>');continue ;}
                if(i==3||i==7||i==11||i==15){document.write(x+symbols[i]+'" onclick="cal.in.value +=\''+symbols[i]+'\'"></td></tr><tr  rowspan="1">');continue ;}
                else document.write(x+symbols[i]+'" onclick="cal.in.value +=\''+symbols[i]+'\'"></td>');
            }
            doument.write('</table></form></div>');
        </script>
    </body>
</html>
```

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.

```
<html>
<head>
<style> table,tr, td
{
border: solid black;
width: 33%;
text-align: center;
border-collapse: collapse; background-color:lightblue;
}
table { margin: auto; }
</style>

</head>
<body>
<script>
document.write( "<table><tr><th colspan='3'> NUMBERS FROM 0 TO 10 WITH THEIR SQUARES AND CUBES </th></tr>" );
document.write( "<tr><td>Number</td><td>Square</td><td>Cube</td></tr>" );
for(var n=0; n<=10; n++)
{
document.write( "<tr><td>" + n + "</td><td>" + n*n + "</td><td>" + n*n*n + "</td></tr>" ) ;
}
document.write( "</table>" ) ;
</script>
</body>
</html>
```

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.

3.html

```
<!DOCTYPE html>
<html>
	<head>
		<title>LABPROGRAM 3</title>
		<style>
			html {
				height: 100%;
				}
			body {
				margin: 0px;
				padding: 0px;
				width: 100%;
				height: 100%;
				}

			h1 {
				padding: 10px;
				border: 4px dashed #00FF00;
			}
		</style>
		<script type="text/javascript"  src="script.js"></script>
	</head>
	<body onload="startAnim()">
		<h1 id="text">Text Growing</h1>
	</body>
</html>
```

script.js

```
var text_size = 0;
var timeout1, timeout2;
var text;

function startAnim() {
	text = document.getElementById("text");
	timeout1 = window.setInterval("incr()", 1000);
}

function incr() {
	text_size += 1;
	text.innerHTML = "TEXT GROWING ... "+ text_size +"pt";
	text.style.fontSize = text_size + "pt";
	text.style.color = "red";
	if (text_size > 49) {
		window.clearInterval(timeout1);
		timeout2 = window.setInterval("decr()", 1000);
	}
}

function decr() {
	text_size -= 1;
	text.innerHTML = "TEXT SHRINKING ... "+ text_size +"pt";
	text.style.fontSize = text_size + "pt";
	text.style.color = "blue";
	if (text_size < 6) {
		window.clearInterval(timeout2);
		timeout1 = window.setInterval("incr()", 1000);
	}
}
```

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

4. html

```
<!DOCTYPE html>
<html>
	<head>
		<title>LABPROGRAM 4</title> </head>
		<script type="text/javascript" src=4.js>
		</script>
	</head>
	<body>
		<section align="center">
			<h1>Finding left most vowel</h1>
			<p>Enter a string: <input type="text" id="t1"></p>
			<input type="button" value="Find" onclick = alert(LMV(document.getElementById('t1').value))>
		</section>
		<hr>
		<section align="center">
			<h1>Reverse of a number</h1>
			<p>Enter a number: <input type="text" id="t2"></p>
			<input type="button" value="Reverse" onclick=alert(reverse(document.getElementById('t2').value))>
		</section>
	</body>
</html>
```

4.js

```
function LMV(str)
{
	for(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' )
			return ("Left most vowel of " + str + " is at location " + (i+1) );
	}
	return ("No vowels found for string "+ str);
}

function reverse(num)
{
	rnum=0;
	temp=num;
	if(isNaN(num))
	{
		return "Not a number";
	}
	while(num!=0)
	{
		rnum *= 10;
		rnum+= num % 10;
		num -= num % 10;
		num = Math.floor(num/10);
	}
	return "Reverse of num "+ temp + " is " + rnum;
}
```

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.

5.xml

```
<?xml-stylesheet type="text/css" href="5.css"?>
<STUDENTDATA>
        <STUDENT>
                <USN>USN    : 4MT15IS001</USN>
                <NAME>NAME  : ABHINAV SHET</NAME>
                <COLLEGE>COLLEGE : MITE</COLLEGE>
                <BRANCH>BRANCH :ISE</BRANCH>
                <YEAR>YEAR  : 2015</YEAR>
                <EMAIL>E-MAIL : abhi@gmail.com</EMAIL>
        </STUDENT>
        <STUDENT>
                <USN>USN : 4MT15IS002</USN>
                <NAME>NAME  : ACHAL POONJA</NAME>
                <COLLEGE>COLLEGE : MITE</COLLEGE>
                <BRANCH>BRANCH :ISE</BRANCH>
                <YEAR>YEAR  : 2015</YEAR>
                <EMAIL>E-MAIL : achal@gmail.com</EMAIL>
        </STUDENT>
        <STUDENT>
                <USN>USN    : 4MT15IS003</USN>
                <NAME>NAME  : AFRAH AKRAM</NAME>
                <COLLEGE>COLLEGE : MITE</COLLEGE>
                <BRANCH>BRANCH :ISE</BRANCH>
                <YEAR>YEAR  : 2015</YEAR>
                <EMAIL>E-MAIL : afrah@gmail.com</EMAIL>
        </STUDENT>
</STUDENTDATA>
```

5. css

```
USN{
display:block; margin-left:10px;font-size:14pt; color:Red;
}
NAME{
display:block; margin-left:20px;font-size:14pt; color:Blue;
}
COLLEGE{
display:block; margin-left:20px;font-size:12pt; color:Maroon;
}
BRANCH{
display:block; margin-left:20px;font-size:12pt; color:Purple;
}
YEAR{
display:block; margin-left:20px;font-size:14pt; color:Green;
}
EMAIL{
display:block; margin-left:20px;font-size:12pt; color:Blue;
}
```

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.

```
<strong style="color:green;background:lightpink;">
<?php
      $handle = fopen("counter.txt", "r");
      if(!$handle){ echo "could not open the file"; }
      else {
        $counter=(int)fread($handle,20);
        fclose($handle);
        $counter++;
        echo" <p>WELCOME TO THE PAGE</p> <p align=center><strong> you are visitor no ". $counter . " </strong > </p>" ;
        $handle= fopen("counter.txt", "w" ) ;
        fwrite($handle,$counter) ;
        fclose ($handle) ; }
?>
```

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

```
<strong style="color:green;">
<?php
date_default_timezone_set('Asia/Calcutta');
header("Refresh: 1");
$d=date('yy-m-d H:i:s');
echo "SERVER TIME </br> <strong>". $d ."</strong>";
?>
```

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.

8a.php

```
<html>
        <head>
        <style>
                table { margin: auto;background-color:silver;align:center; }
                input,p { text-align:right; }
        </style>
</head>
<body>
        <form method="post" action="8a.php">
                <table>
                <caption><h2> SIMPLE CALCULATOR </h2></caption>
                <tr>
                        <td>First Number:</td><td><input type="text" name="num1" /></td>
                        <td rowspan="2"><button type="submit" name="submit" value="calculate">Calculate</td></tr>
                <tr>
                        <td>Second Number:</td><td><input type="text" name="num2"/></td>
                        <td rowspan = "2"><input type="reset" name="clear" value="clear"></td>
                </tr>
        </form>
        <?php
        if(isset($_POST['submit'])) // it checks if the input submit is filled
        {
                $num1 = $_POST['num1'];
                $num2 = $_POST['num2'];
                if(is_numeric($num1) and is_numeric($num2) )
                {
                        echo "<tr><td> Addition :</td><td><p>".($num1+$num2)."</p></td>";
                        echo "<tr><td> Subtraction :</td><td><p> ".($num1-$num2)."</p></td>";
                        echo "<tr><td> Multiplication :</td><td><p>".($num1*$num2)."</p></td>";
                        echo "<tr><td>Division :</td><td><p> ".($num1/$num2)."</p></td>";
                        echo "</table>";
                }
                else
                {
                        echo"<script> alert(' ENTER VALID NUMBER');</script>";
                }
        }
        ?>
</body>
</html>
```

8bcd.php

```php
<?php
        function display($x){
                foreach ($x as $y) {
                        foreach ($y as $z) {
                                echo $z ."   ";
                        }echo "<br>";
                }echo "<br>";
        }
        $mat1 = [[1,2,3],[4,5,6],[7,8,9]];
        $mat2 = [[1,2,3],[4,5,6],[7,8,9]];
        echo "<b>First Matrix : </b><br>" ; display($mat1);
        echo "<b>Second Matrix : </b><br>"; display($mat2);
        for ($i=0; $i < 3; $i++)
                for ($j=0; $j < 3; $j++)
                        $mat3[$i][$j] = $mat1[$j][$i];
        echo "<b>Transpose Of First Matrix : </b><br>"; display($mat3);
        for ($i=0; $i < 3; $i++)
                for ($j=0; $j < 3; $j++)
                        $mat3[$i][$j] = $mat1[$i][$j] + $mat2[$i][$j];
        echo "<b>Addition Of Two Matrix : </b><br>"; display($mat3);
        for ($i=0; $i < 3; $i++)
                for ($j=0; $j < 3; $j++){
                        $mat3[$i][$j] = 0;
                        for ($k=0; $k < 3; $k++)
                                $mat3[$i][$j] += $mat1[$i][$k] * $mat2[$k][$j];
                }
        echo "<b>Multiplication Of Two Matrix : </b><br>"; display($mat3);
?>
```

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 statesList.
b. Search for a word in states that begins with k and ends in s. Perform a caseinsensitive comparison. [Note: Passing re.Ias a second parameter to method compile performs a case-insensitive comparison.] Store this word in element1 of statesList.
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.

9.php

```
<html>
<body>
        <?php
                $states = "Mississippi Alabama Texas Massachusetts Kansas";
                $b = explode(' ',$states);
                echo "<br>ORIGINAL ARRAY :<br>";
                foreach ( $b as $i => $value )
                        echo "states[$i] = $value<br>";
                foreach ($b as $c)
                {
                        $n = strlen($c);
                        echo $n;
                        if($c[$n-1]=='s' && $c[$n-2]=='a' && $c[$n-3]=='x')     $d[0] = $c;
                        if($c[0]=='K' && $c[$n-1]=='s') $d[1] = $c;
                        if($c[0]=='M' && $c[$n-1]=='s') $d[2] = $c;
                        if($c[$n-1]=='a') $d[3] = $c;
                }
                echo "<br>RESULTANT ARRAY :<br>";
                for ($i=0; $i < count($d); $i++)
                        echo "statesList[$i] = $d[$i]<br>";
        ?>
</body>
</html>
```

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

```
<!DOCTYPE html>
<html>
<body>
<style>
table, td, th
{
border: 1px solid black;
width: 33%;
text-align: center;
border-collapse:collapse;
background-color:lightblue;
}
table { margin: auto; }
</style>
<?php
$servername = "localhost";
$username = "root";
$password = "root";
$dbname = "weblab";
$a=[];
$conn = mysqli_connect($servername, $username, $password, $dbname);
if ($conn->connect_error)
die("Connection failed: " . $conn->connect_error);
$sql = "SELECT * FROM student";
$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>Address</th></tr>";
```

```
if ($result->num_rows> 0)
{
while($row = $result->fetch_assoc()){
echo "<tr>";
echo "<td>". $row["usn"]."</td>";
echo "<td>". $row["name"]."</td>";
echo "<td>". $row["addr"]."</td></tr>";
array_push($a,$row["usn"]);
}
}
else
echo "Table is Empty";
echo "</table>";
$n=count($a);
$b=$a;
for ( $i = 0 ; $i< ($n - 1) ; $i++ )
{
$pos= $i;
echo "<td>". $d[$i]."</td></tr>";
}
echo "</table>";
$conn->close();
?>
</body>
</html>
```