WEB LAB 2020 RGIT

Questions:

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

CODE:

```
<!DOCTYPE html>
<html>
 <head>
   <title>Calculator using JavaScript</title>
 </head>
 <body>
   <h1 style="text-align: center; color: brown;">Simple Calculator Using JavaScript</h1>
   <center>
     Enter 1st Number: 
        <input type="number" name="num1" id="num1" />
       Enter 2nd Number: 
        <input type="number" name="num2" id="num2" />
       <input type="button" value="+" onclick="performop(this.value);"/>
           <input type="button" value="-" onclick="performop(this.value);"/>
          <input type="button" value="*" onclick="performop(this.value);"/>
          <input type="button" value="/" onclick="performop(this.value);"/>
         Result: 
         <input type="number" name="res" id="res" readonly/>
       ERROR: 
         ZERO IS NOT DIVISIBLE !!
       <script>
   function performop(op) {
     var n1 = parseInt(document.getElementById("num1").value);
     var n2 = parseInt(document.getElementById("num2").value);
     document.getElementById("err").style.visibility = "hidden"
     var result = 0;
     if(op == "+") {
       result = n1+n2;
     else if (op == "-") {
       result = n1-n2;
     else if (op == "*") {
       result = n1*n2;
     else {
       if(n2!=0){
        result = n1/n2;
       } else {
         document.getElementById("err").style.visibility = "visible"
     document.getElementById("res").value = result;
   </script></body></html>
```

Simple Calculator Using JavaScript

Enter 1st Number:	
Enter 2nd Number:	
+	- * /
Result:	

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.

CODE:

```
<!DOCTYPE html>
<html>
 <head>
   <title>Squares and Cubes</title>
 </head>
 <!-- HTML CODE -->
 <body onload="squareCube();">
   <h1 style="text-align: center;color: brown;">Squares and Cubes Using JavaScript</h1>
   <hr>
   <center>
     <div id="tab"></div>
   </center>
   <!-- JS Functions -->
   <script>
     function squareCube() {
      var result = "  SNO SQUARE CUBE ";
      var sqr=0,cube=0;
      for(i=0;i<=10;i++) {
        sqr = i*i;
        cube = i*i*i;
        result += ""+i+""+sqr+""+cube+"";
      result += "";
       document.getElementById("tab").innerHTML = result;
   </script>
 </body>
</html>
```

OUTPUT:

Squares and Cubes Using JavaScript

SNO	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-GR OWING" 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 f ont size decreases to 5pt.

CODE:

```
<!DOCTYPE html>
<html>
  <head>
    <title>JavaScript - Grow & Shrink Text</title>
    <!-- JS Functions -->
    <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";
      window.status = c;
      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() {
      t.innerHTML = "TEXT-SHRINKING: " + c + "pt";
      t.style.fontSize = c + "pt";
      window.status = c;
      if (c == 5) {
      window.clearTimeout(t1);
        t.style.color = "blue";
    </script>
  </head>
  <!-- HTML CODE -->
  <body onload="start()">
    <center>
      </center>
  </body>
</html>
```

OUTPUT:

TEXT-GROWING: 24pt

12740 1-5500 tays

TEXT-SHRINKING: 44pt

- 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

CODE:

```
<!DOCTYPE html>
<html>
<head>
<title>JavaScript Functions</title>
</head>
  <body>
    <!-- HTML CODE -->
    <h1 style="color: darkred;">JavaScript to </h1>
    <h2 style="color: darkblue;">
        Find Position in the String of the Left-Most Vowel [OR]
        Print Given Number in Reverse Order
      </h2>
    <hr>
    <b>Enter String/Number: </b><input class="tb" type="text" id="str"</pre>
    onchange="evalinput(this.value);"/>
    <h2 style="color: red;">Result: </h2>
    <div id="result"></div>
    <!-- JS Functions -->
    <script>
      function evalinput(str) {
        // Checks if String is Number
        if (Number.isInteger(parseInt(str))) {
          var num = parseInt(str);
          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>";
        // If Not a Number Checks for Left most Vowel if exist
          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;
             }
          text += "The entered string has no vowels</h3>";
          document.getElementById("result").innerHTML = text;
```

}	
}	
<td>></td>	>

JavaScript to	JavaScript to
Find Position in the String of the Left-Most Vowel [OR] Print Given Number in Reverse Order	Find Position in the String of the Left-Most Vowel [OR] Print Given Number in Reverse Order
Enter String/Number: RGIT Result: The entered string is: RGIT The leftmost vowel is: I The position of the leftmost vowel I is: 3	Enter String/Number: 1234 Result: Reverse of 1234 is 4321

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.

CODE:

XML File:

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/css" href="student.css"?>
<students>
  <student>
    <sname>ABCD</sname>
    <usn>1PE15CS001</usn>
    <college>PESIT-BSC</college>
    <br/>
<br/>
dranch>CSE</branch>
    <yoj>2015</yoj>
    <email>abcd@xyz.com</email>
  </student>
  <student>
    <sname>QWERT</sname>
    <usn>1PE15CS002</usn>
    <college>PESIT-BSC</college>
    <br/>
<br/>
dranch>CSE</branch>
    <yoj>2015</yoj>
    <email>qwerty@xyz.com</email>
  </student>
  <student>
    <sname>PQRS</sname>
    <usn>1PE15CS003</usn>
    <college>PESIT-BSC</college>
    <br/>
<br/>
dranch>CSE</branch>
    <yoj>2015</yoj>
    <email>pqrs@xyz.com</email>
  </student>
</students>
 CSS File: ( student.css )
   students {
     background-color: pink;
     font-family: 'cambria';
     color: red;
     font-size: 20px;
   student {
     display: block;
```

margin-bottom: 30px;

```
margin-left: 20px;
}
sname {
  font-size: 22px;
  color: blue;
usn:before {
  content: "USN: ";
  font-weight: bold;
college:before {
  content: "Affiliated College: ";
  font-weight: bold;
branch:before {
  content: "Branch: ";
  font-weight: bold;
yoj:before {
  content: "Year of Joining: ";
  font-weight: bold;
}
email:before {
  content: "EMAILID: ";
  font-weight: bold;
usn, college, branch, yoj, email {
  display: block;
```

ABCD

USN: 1PE15CS001

Affiliated College: PESIT-BSC

Branch: CSE

Year of Joining: 2015 EMAILID: abcd@xyz.com

QWERT

USN: 1PE15CS002

Affiliated College: PESIT-BSC

Branch: CSE

Year of Joining: 2015

EMAILID: qwerty@xyz.com

PQRS

USN: 1PE15CS003

Affiliated College: PESIT-BSC

Branch: CSE

Year of Joining: 2015 **EMAILID:** pqrs@xyz.com

PHP SETUP:

- 1. Save the files with .php file extension .
- 2. Place your PHP file in the "htdocs" folder → weblab folder → Save Here
- 3. Turn on XAMP Apache Server.
- 4. Open Browser → Address Bar type "localhost/weblab/<file-name>.php" Eg. "localhost/weblab/prg6.php"
- 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.

CODE:

```
PHP File: (prg6.php)

<ppp
    $file = 'count.txt';
    $count = strval(file_get_contents($file));
    file_put_contents($file, $count + 1); echo("You are
    visitor number:".$count);

>>

Text File: ( count.txt )

1

OUTPUT:
```

You are visitor number:2

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

CODE:

PHP File: (prg7.php)

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <meta http-equiv="refresh" content="1">
  </head>
  <body>
    <h1>Display Current Date & Time</h1>
    <h2>
        echo "Server Time: <span style='color:purple';> " . date("h:i:s a")."</span>";
        echo '<br /><br />';
        echo "Today's Date: <span style='color:blue';>" . date("d-m-Y");
        echo '<br />':
        date default timezone set('Asia/Kolkata');
        echo " </span> Current Time: <span style='color:red';>" . date("h:i:s a") . "</span>";
    </h2>
  </body>
</html>
```

Display Current Date & Time

Server Time: 06:04:13 pm

Today's Date: 16-12-2020 Current Time: 10:34:13 pm

- 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

CODE:

a. Implement simple calculator operations

PHP File: (prg8a.php)

```
<!DOCTYPE html>
<html>
<head>
 <meta charset="UTF-8">
 <title>Simple Calculator Using PHP</title>
</head>
<body>
 <h1>Simple Calculator Using PHP</h1>
 <form action="prg8a.php" method="post">
   Enter First Number: 
      <input type="text" name="first" required />
     Enter Second Number: 
      <input type="text" name="second" required />
     Select Operator: 
        <select name="op">
          <option>Select Operation
          <option value="+">Addition</option>
          <option value="-">Subtraction</option>
          <option value="*">Multiplication</option>
          <option value="/">Division</option>
          <option value="%">Remainder</option>
        </select>
      <input type="submit" name="pop" value="Perform Operation">
      </form>
```

```
<?php
    if(isset($_POST['pop'])) {
      echo "<h1>Result is </h1>";
      $num1 = $_POST["first"];
      $num2 = $_POST["second"];
      $op = $_POST["op"];
      $result = 0;
      switch($op) {
        case '+': $result = $num1 + $num2;
          echo "<h1>Addition of 2 Numbers: " . $result . "</h1>";
        case '-': $result = $num1 - $num2;
          echo "<h1>Subtraction of 2 Numbers: " . $result . "</h1>";
        break:
        case '*' : $result = $num1 * $num2;
          echo "<h1>Product of 2 Numbers: " . $result . "</h1>";
        break;
        case '/' :
          if($num2==0) $result="UNDEFINED";
          else $result = $num1 / $num2;
          echo "<h1>Division of 2 Numbers: " . $result . "</h1>";
        break;
        case '%':
          if($num2==0) $result="UNDEFINED";
          else $result = $num1 % $num2;
          echo "<h1>Remainder of 2 Numbers: " . $result . "</h1>";
        break;
    }
?>
</body>
</html>
```

Simple Calculator Using PHP

Enter First Number:	
Enter Second Number:	
Select Operator:	Select Operation ~
Perform Operation	

Result is

Product of 2 Numbers: 5700

- b. Find the transpose of a matrix
- c. Multiplication of Matrices
- d. Addition of two Matrices

PHP File: (prg8bcd.php)

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>Program 8 BCD</title>
</head>
<body>
 <!—THIS IS COMMENT LINE DON'T NEED TO TYPE 
ightarrow
 <!—change action="PROGRAM NAME" eg: if you save it as p8.php then change action="p8.php" below \rightarrow
 <form action="prg8bcd.php" method="post">
     <h5>Matrix 1</h5>
      Enter [ 0 , 0 ]: 
      <input type="text" name="M100" required />
     Enter [ 0 , 1 ]: 
      <input type="text" name="M101" required />
     Enter [ 1 , 0 ]: 
      <input type="text" name="M110" required />
     Enter [ 1 , 1 ]: 
      <input type="text" name="M111" required />
     <h5>Matrix 2</h5>
      Enter [ 0 , 0 ]: 
      <input type="text" name="M200" required />
     Enter [ 0 , 1 ]: 
      <input type="text" name="M201" required />
     Enter [ 1 , 0 ]: 
      <input type="text" name="M210" required />
     Enter [ 1 , 1 ]: 
      <input type="text" name="M211" required />
     <input type="submit" name="pop" value="Calculate">
      </form>
</body>
</html>
 if(isset($_POST['pop'])) {
   $M100 = $_POST["M100"];
   $M101 = $_POST["M101"];
   $M110 = $_POST["M110"];
   $M111 = $_POST["M111"];
   $M200 = $_POST["M200"];
   $M201 = $_POST["M201"];
   $M210 = $_POST["M210"];
   $M211 = $_POST["M211"];
   // transpose matrix
   $matrix1 = array(array($M100, $M101), array($M110, $M111));
   $matrix2 = array(array($M200, $M201), array($M210, $M211));
   $rowCount = count($matrix1); //Provides the rowcount of matrix
```

```
$colCount = count($matrix1[0]); //Provides the column count of matrix
$rowCount2 = count($matrix2);
$colCount2 = count($matrix2[0]);
echo "<hr>";
echo "";
echo "<h5>The input matrix 1 of (". count($matrix1) . "x" . count($matrix1[0]) .") :</h5>";
for (\$r = 0; \$r < \$rowCount; \$r++) {
  echo "</br>";
  for ($c = 0; $c < $colCount; $c++) {
    echo $matrix1[$r][$c] . " ";
 }
echo "";
echo "<h5>The input matrix 2 of (". count($matrix2) . "x" . count($matrix2[0]) .") :</h5>";
for (\$r = 0; \$r < \$rowCount; \$r++) {
  echo "</br>";
 for ($c = 0; $c < $colCount; $c++) {
    echo \max[\$r][\$c] . " ";
 }
}
echo "";
echo "<hr>";
echo "";
//The sum of the matrix
echo "<h5>[D] The Sum of matrix is:</h5>";
Ssumerr=false:
$sum="";
for (\$r = 0; \$r < \$rowCount; \$r++) {
  echo "</br>";
  for ($c = 0; $c < $colCount; $c++) {
    if(is_numeric($matrix1[$r][$c]) && is_numeric($matrix2[$r][$c])){
      val = matrix1[r][c] + matrix2[r][c];
      $sum = $sum . " " . $val;
    }else $sumerr=true;
 }
  $sum = $sum . " <br>";
  if($sumerr==true) break;
if($sumerr==true) echo "Addition of these Matrices is not Possible";
else echo $sum;
echo "";
echo "<h5>[C] The Multiplication of matrix is:</h5>";
$mulerr=false;
$mul="";
if($colCount == $rowCount2)
  for($r = 0;$r < $rowCount;$r++)
    echo "</br>";
    for($c = 0;$c < $colCount;$c++)
      if(is_numeric($matrix1[$r][$c]) && is_numeric($matrix2[$r][$c])){
        $val = $matrix1[$r][$c] * $matrix2[$r][$c];
        $mul = $mul . " " . $val;
      }
      else $mulerr=true;
    $mul = $mul . " <br>";
    if($mulerr==true) break;
  if($mulerr==true) echo "Multiplication of these Matrices is not Possible";
  else echo $mul:
} else {
  echo "<h5>The matrix multiplication is not possible.</h5>";
echo "";
```

```
echo "<hr>";
   echo "";
   //The transpose of the matrix
   echo "<h5>[B] Transpose Matrix 1:</h5>";
   for (\$r = 0; \$r < \$colCount; \$r++) {
     echo "</br>";
     for ($c = 0; $c < $rowCount; $c++) {
       echo $matrix1[$c][$r] . " ";
   echo "";
   echo "<h5>Transpose Matrix 2:</h5>";
   for (\$r = 0; \$r < \$colCount2; \$r++) {
     echo "</br>";
     for ($c = 0; $c < $rowCount2; $c++) {
       echo $matrix2[$c][$r] . " ";
     }
  }
   echo "";
   echo "<hr>";
}
   OUTPUT:
     Matrix 1
                                                       The input matrix 1 of (2x2): The input matrix 2 of (2x2):
     Enter [ 0 , 0 ]: 1
     Enter [ 0 , 1 ]: 2
                                                       3 4
                                                                               78
     Enter [ 1, 0 ]: 3
     Enter [ 1, 1]: 4
                                                       [D] The Sum of matrix is: [C] The Multiplication of matrix is:
     Matrix 2
                                                       68
                                                                             5.12
                                                       10 12
     Enter [ 0 , 0 ]: 5
     Enter [ 0 , 1 ]: 6
                                                       [B] Transpose Matrix 1: Transpose Matrix 2:
     Enter [ 1, 0]: 7
     Enter [ 1 , 1 ]: 8
                                                       13
     Calculate
    Matrix 1
    Enter [ 0 , 0 ]: a
                                                       The input matrix 1 of (2x2) : The input matrix 2 of (2x2) :
    Enter [ 0 , 1 ]: b
    Enter [ 1, 0 ]: c
    Enter [ 1 , 1 ]: d
    Matrix 2
                                                                                         [C] The Multiplication of matrix is:
                                                       [D] The Sum of matrix is:
    Enter [ 0 , 0 ]: 1
                                                       Addition of these Matrices is not Possible Multiplication of these Matrices is not Possible
    Enter [ 0 , 1 ]: 2
    Enter [ 1, 0 ]: 3
                                                       [B] Transpose Matrix 1: Transpose Matrix 2:
    Enter [ 1, 1 ]: 4
    Calculate
```

- 9. Write a PHP program named states.py that declares some variable states with the 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 case insensitive comparison. [Note: Passing re.las s second parameter to method compile performs a caseinsensitive comparison.] Store this word in element 1 of statesList.
 - c)Search for a word in states that begins with M and ends in s. Store this element in 2 of the list.
 - d)Search for a word in states that ends in a. Store this word in element 3 of the list.

CODE:

</html>

PHP File: (prg9.php)

```
<?php
$allTheStates = "Mississippi Alabama Texas Massachusetts Kansas";
$statesArray = array();
$states1 = explode(' ', $allTheStates);
\dot{S}i = 0:
//states that ends in xas
foreach ($states1 as $state) {
  if (preg_match('/xas$/', ($state))) {
    $statesArray[$i] = ($state);
    $i = $i + 1;
    echo "<h3>The States that ends in xas: " . $state . "</h3>";
//states that begins with k and ends in s
foreach ($states1 as $state) {
  if (preg_match('/^k.*s$/i', ($state))) {
    $statesArray[$i] = ($state);
    $i = $i + 1:
    echo "<h3>The states that begins with k ans ends in s: " . $state ."</h3>";
}
//states that begins with M and ends in s
foreach($states1 as $state) {
  if (preg_match('/^M.*s$/', ($state))) {
    $statesArray[$i] = ($state);
    $i = $i + 1:
    print "<h3>The states that begins with M and ends in s: " . $state . "</h3>";
//states that ends in a
foreach($states1 as $state) {
  if (preg_match('/a$/', ($state))) {
    $statesArray[$i] = ($state);
    \dot{S}i = \dot{S}i + 1:
    print "<h3> The states that ends in a: " . $state . "</h3>";
foreach ($statesArray as $element => $value) {
  echo( "<h4>" . $value . " is the element " . $element . "</h4>");
?>
</body>
```

```
The States that ends in xas:Texas
The states that begins with k ans ends in s:Kansas
The states that begins with M and ends in s:Massachusetts
The states that ends in a:Alabama
Texas is the element 0
Kansas is the element 1
Massachusetts is the element 2
Alabama is the element 3
```

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

```
CODE:
PHP File: (prg10.php)
 DATABASE SETUP
1. Go to phpmyadmin
2. Go to SQL tab
3. Type the below code:
 CREATE DATABASE weblab;
 CREATE TABLE student(usn varchar(10),name varchar(20),address varchar(20));
 INSERT INTO 'student' ('usn', 'name', 'address') VALUES
 ('1RG17CS300', 'QWE', 'QWEaddress'),
 ('1RG17CS100', 'ABC', 'ABCaddress'),
 ('1RG17CS200', 'XYZ', 'XYZaddress'),
 ('1RG17CS250', 'MNO', 'MNOaddress');;
4. DATABASE READY NOW TYPE THE PHP CODE IN PHP FILE prg10.php -->
<!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 = "";
$dbname = "weblab";
$a=[[]];
$b=[[]];
// Create connection
// Opens a new connection to the MySQL server
$conn = mysgli connect($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 student";
// performs a query against thedatabase
$result = $conn->query($sql);
echo "<br>":
echo "<center> BEFORE SORTING</center>";
echo "";
if($result)
{
  echo"USNNAMEAddress";
  // output data of each row and fetches a result row as an associative array
  while($row = $result->fetch_assoc()){
   echo "";
   echo "". $row["usn"]."";
   echo "". $row["name"]."";
   echo "". $row["address"]."";
   array_push($a,[$row["usn"],$row["name"],$row["address"]]);
 }
  foreach ($a as $key => $rowSORT) {
   // replace 0 with the field's index/key
   if($key!=0){
     $b[$key] = $rowSORT[0];
 }
 array_multisort($b, SORT_ASC, $a);
else echo "<center style='color:red'> Table is Empty</center>";
echo "";
echo "<br>";
echo "<center> AFTER SORTING</center>";
echo "";
if($result)
{
  echo"USNNAMEAddress";
  $n=count($a);
 for ($i = 0; $i<($n-1); $i++)
   echo "";
   echo "". $a[$i][0]."";
   echo "". $a[$i][1]."";
   echo "". $a[$i][2]."";
   echo "";
}
else echo "<center style='color:red'> Table is Empty</center>";
echo "";
$conn->close();
</body>
</html>
```

BEFORE SORTING

USN	NAME	Address
1RG17CS300	QWE	QWEaddress
1RG17CS100	ABC	ABCaddress
1RG17CS200	XYZ	XYZaddress
1RG17CS250	MNO	MNOaddress

AFTER SORTING

USN	NAME	Address
1RG17CS100	ABC	ABCaddress
1RG17CS200	XYZ	XYZaddress
1RG17CS250	MNO	MNOaddress
1RG17CS300	QWE	QWEaddress