BET's

BASAVAKALYAN ENGINEERING COLLEGE, BASAVAKALYAN

Department

Of

Computer Science & Engineering

WEB TECHNOLOGY LABORATORY WITH MINI PROJECT

(15CSL77)

VII Semester CBCS

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WEB TECHNOLOGY LABORATORY WITH MINI PROJECT - 15CSL77
[As per Choice Based Credit System (CBCS) scheme]

(Effective from the academic year 2016 -2017)

Course objectives: This course will enable students to

1. Design and develop static and dynamic webpages.
2. Familiarize with Client-Side Programming, Server-Side Programming, Active serverPages.
3. Learn Database Connectivity to webapplications.

Lab Syllabus

1. Write a JavaScript to design a simple calculator to perform the following operations: sum,product, difference and quotient.
2. Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 andoutputs HTML text that displays the resulting values in an HTML tableformat.
3. Write a JavaScript code that displays text "TEXT-GROWING" with increasing font size in theinterval of 100ms in RED COLOR, when the font size reaches 50pt it displays "TEXT-SHRINKING" in BLUE color. Then the f ont size decreases to5pt.
4. Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions forthe followingproblems:

a. Parameter: Astring

b. Output: The position in the string of the left-mostvowel

c. Parameter: Anumber

d. Output: The number with its digits in the reverseorder

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.
6. Write a PHP program to keep track of the number of visitors visiting the web page and to displaythis count of visitors, with properheadings.
7. Write a PHP program to display a digital clock which displays the current time of theserver.

8. Write the PHP programs to do thefollowing:

a. Implement simple calculatoroperations.

b. Find the transpose of amatrix.

c. Multiplication of twomatrices.

d. Addition of twomatrices.

9. Write a PHP program named states.py that declares a variable state with value "Mississippi Alabama Texas Massachusetts Kansas". write a PHP program that does thefollowing:

a. Search for a word in variable states that ends in xas. Store this word in element 0 of a listnamed statesList.

b. Searchforawordinstatesthatbeginswithkandendsins.Performacase-insensitivecomparison.[Note: Passing re.Ias a second parameter to method compile performs a case-insensitive comparison.] Store this word in element1 ofstatesList.

c. Search for a word in states that begins with M and ends in s. Store this word in element 2 ofthe list.

d. Search for a word in states that ends in a. Store this word in element 3 of thelist.

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

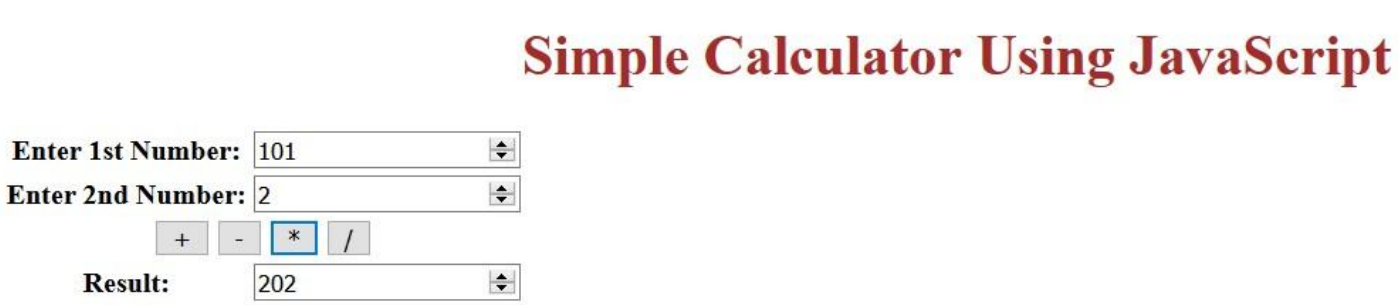
PROGRAMS

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

```
<!DOCTYPE html>
 <html>
   <head>
     <title>Calculator using JavaScript</title>
  </head>
       <body>
     <h1 style="text-align: center; color: brown;">Simple Calculator Using JavaScript</h1>
     <table>
       <tr>
         <th>Enter 1st Number: </th>
         <td><input type="number" name="num1" id="num1" /></td>
       </tr>
       <tr>
         <th>Enter 2nd Number: </th>
         <td><input type="number" name="num2" id="num2" /></td>
       </tr>
       <tr>
         <thcolspan="2">
           <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);"/>
         </th>
       </tr>
       <tr>
         <th>Result: </th>
         <td><input type="number" name="res" id="res" readonly/></td>
       </tr>

     </table>

     <script>
       function performop(op) {
         var n1 = parseInt(document.getElementById("num1").value);
         var n2 = parseInt(document.getElementById("num2").value);
         var result = 0;
         if(op == "+") {
           result = n1+n2;
         }
         elseif(op=="-"){
           result =n1-n2;
         }
         elseif(op=="*"){
           result =n1*n2;
         }
         else {
```

```
            result = n1/n2;
          }
          document.getElementById("res").value = result;
        }
      </script>
    </body>
</html>
```

OUTPUT:



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

```
<!DOCTYPE html>
<html>
  <head>
    <title>Squares and Cubes</title>
</head>
  <body onload="sqrcub();">
    <h1 style="text-align: center;color: brown;">Squares and Cubes Using JavaScript</h1>
    <hr>
    <div id="tab">
    </div>

    <script>
  function sqrcub() {
        var result = "<table border='1'
cellpadding='10'><tr><th>SNO</th><th>SQUARE</th><th>CUBE</th></tr>";
        var i,sqr=0,cube=0;
        for(i=0;i<=10;i++) {
          sqr = i*i;
          cube = Math.pow(i,3);
          result += "<tr><td>"+i+"</td><td>"+sqr+"</td><td>"+cube+"</td></tr>";
        }
        result += "</table>";
        document.getElementById("tab").innerHTML = result;
      }
    </script>
  </body>
</html>
```

OUTPUT:

Squares and Cubes Using JavaScript

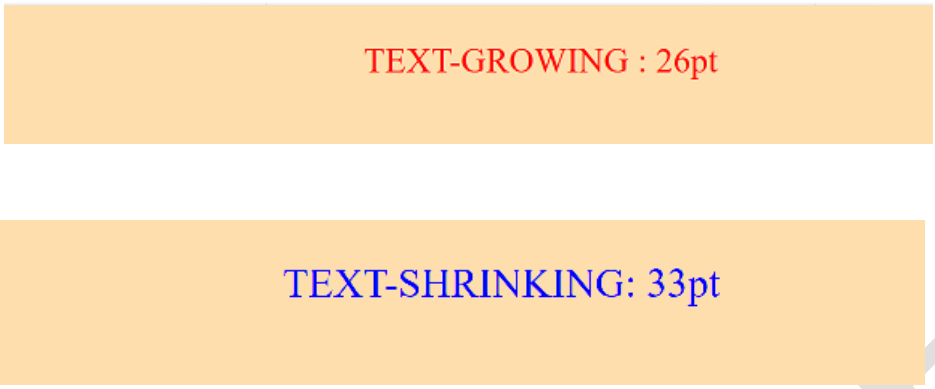
SNO	SQUARE	CUBE
0	0	0
1	1	1
2	4	8
3	9	27
4	16	64
5	25	125
6	36	216
7	49	343
8	64	512
9	81	729
10	100	1000

3. Write a JavaScript code that displays text "TEXT-GR OWING" with increasing font size in the intervalof100msinREDCOLOR,whenthefontsizereaches50ptitdisplays"TEXT-SHRINKING" in BLUE color. Then the font size decreases to5pt.

```
<!DOCTYPE html>
<html>
<head>
        <title>JavaScript - Grow & Shrink Text</title>
<script language = "JavaScript">
var c = 0, t1;
        function start()
        {
          t1 = window.setInterval("incr()", 100);
        }
        functioncr() { 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() {
            c = c - 1;
          t.innerHTML = "TEXT-SHRINKING: " + c + "pt";
          t.style.fontSize = c + "pt";
          window.status = c;
          if (c == 5) {
            window.clearTi
            meout(t1);
          }
          t.style.color = "blue";
        }
      </script>
    </head>
    <body bgcolor="#ffdead" onload="start()">

    <center>
      <p id="t"></p>
```

```
</center></body></html>
```

OUTPUT:



4. Develop and demonstrate a HTML5 file that includes JavaScript script that uses functionsfor the followingproblems:

a. Parameter: Astring

b. Output: The position in the string of the left-mostvowel

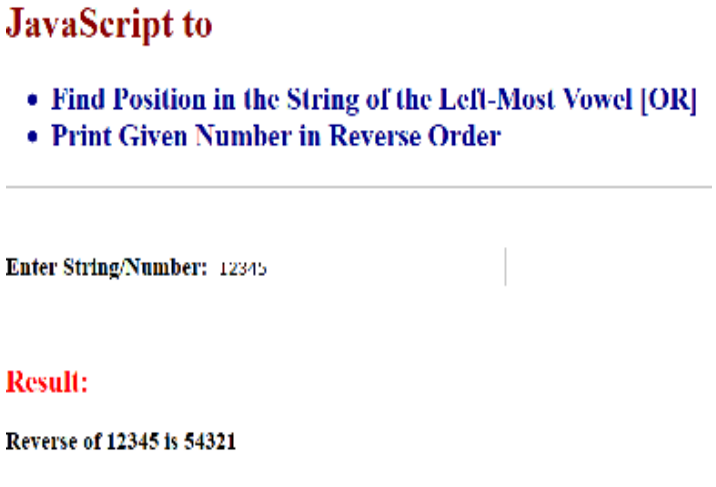
c. Parameter: Anumber

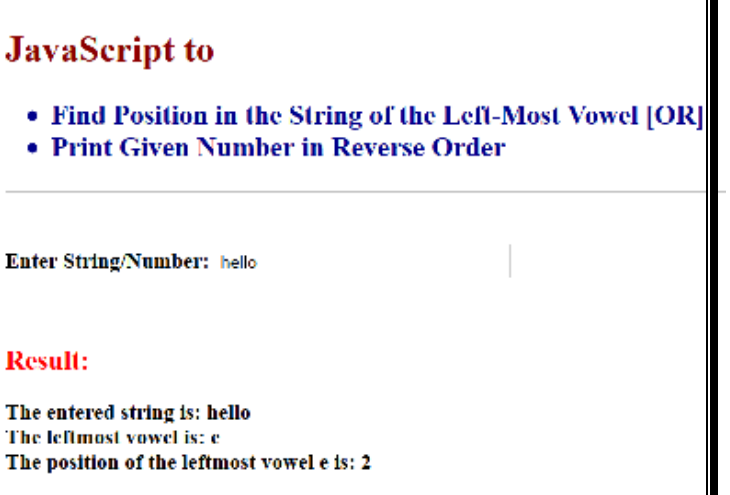
d. Output: The number with its digits in the reverseorder

```
<!DOCTYPE html>
<html>
   <head>
      <title>JavaScript Functions</title>
      <style>
    .tb {
            padding: 4px 22px
            4px 4px;
            border:1px solid
            red; width:230px;
            height:2
            0px;
            font:10pt
            verdana;
          }
      </style>
</head>

    <body>
      <h1 style="color: darkred;">JavaScript to </h1>
      <h2 style="color: darkblue;">
    <ul>
            <li>Find Position in the String of the Left-Most Vowel [OR]</li>
            <li>Print Given Number in Reverse Order</li>
         </ul>
      </h2>
      <hr>
      <br/>
      <p style="font-size: 14pt;"><b>Enter String/Number: </b><input class="tb"
type="text" id="str" onblur="evalinput(this.value);"/></p>
      <br/>
      <h2 style="color: red;">Result: </h2>
      <div id="result"></div>
      <script>
         function evalinput(str) {
```

```
                    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);
          “</h3>";
  }}
  document.getElementById("result").innerHTML = "<h3>Reverse of " + str + " is " + rev +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:





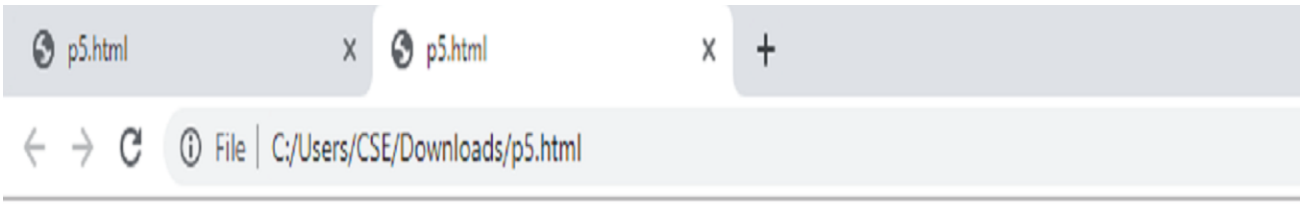
5. **Design an XML document to store information about a student in an engineering college affiliated to VTU. The information must include USN, Name, and Name of the College, Branch, Year of Joining, and email id. Make up sample data for 3 students. Create a CSS style sheet and use it to display the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

Procedure:

```
<!DOCTYPE HTML>
<html>
 <head>
<link rel="stylesheet" type="text/css" href="template.css">
</head>
 <h1> STUDENTS DESCRIPTION </h1>
<studentlist>
<student>
<usn> 3BK16CS042</usn>
<name>GOPAL </name>
<college> Basavakalyan Engineering College </college>
<branch> COMPUTER SCIENCE </branch>
<joindate> 20-july-2007 </joindate>
<emailid> gopal.j@gmail.com </emailid>
</student>
<student>
<usn> 3BK16CS043</usn>
<name>kashi</name>
<college> Basavakalyan Engineering College </college>
<branch> COMPUTER SCIENCE </branch>
<joindate> 26-june-2009 </joindate>
<emailid> kashi67.g@gmail.com </emailid>
</student>
<student>
<usn> 3BK16CS044</usn>
<name>madhu</name>
<college> Basavakalyan Engineering College </college>
<branch> COMPUTER SCIENCE </branch>
<joindate> 9-mar-2002 </joindate>
<emailid> mad.78@gmail.com </emailid>
</student>
</studentlist>
```

template.css

```
usn{color:maroon;font-family:verdhana;font-size:20pt;}
name{color:green;font-family:verdhana;font-size:20pt;}
college{color:red;font-family:verdhana;font-size:20pt;}
branch{color:yellow;font-family:verdhana;font-size:20pt;}
joindate{color:aqua;font-family:verdhana;font-size:20pt;}
emailid{color:green;font-family:verdhana;font-size:20pt;}
student{display:block;margin-top:10px;}
heading{display:block;}
```



STUDENTS DESCRIPTION

3BK16CS040 sachin Basavakalyan Engineering College COMPUTER SCIENCE 20-july-2016 sacbukkigar98@gmail.com
3BK16CS020 Manoj Basavakalyan Engineering College COMPUTER SCIENCE 26-july-2016 reddymanoj452@gmail.com
3BK16CS044 madhu Basavakalyan Engineering College COMPUTER SCIENCE 9-aug-2016 mad.78@gmail.com

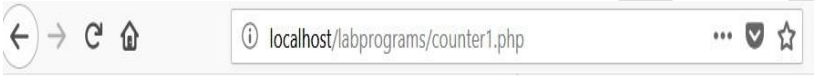
6. Write a PHP program to keep track of the number of visitors visiting the web page and to display this count of visitors, with proper headings.

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

Steps to run PHP File in XAMPP:

1. **Savethefileswith.phpfileextension.**
2. **PlaceyourPHPfileinthe"htdocs"folder---→XAMPPfolder---→C:Drive**
3. **ThefilepathisC:\xampp\htdocsforthewebserver.**
4. **Create.txtfile(count.txtinourprogram)andsaveitinthephpfilelocation.**
5. **Initializeandsavethe.txtfiletoo.**
6. **YoucanseetheXAMPPiconinthetaskbar/controlpanel.ClickonApacheandstarttheserver. Openupanywebbrowser,enterhttp://localhost/usrpgm/counter1.php**

OUTPUT:



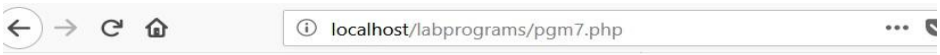
You are visitor number:18

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

Note: The JavaScript function(clientside)renders the time stamp of the local system.
Where as php(server side program)renders the time stamp from the server.

```
<!DOCTYPE html>

<html>

  <head>

     <meta charset="UTF-8">

     <meta http-equiv="refresh" content="1">

  </head>

  <body>

     <h1>Display Current Date & Time</h1>

     <h2>

     <?php

     echo"Thetimefromtheserveris<spanstyle='color:tomato';>".date("h:i:sa")."</span>";

     echo '<br/>';
     echo "Today's Date is <span style='color:tomato';>" . date("d-m-Y");

         date_default_timezone_set('Asia/Kolkata');

    echo " </span> and Current Time is <span style='color:red';>" . date("h:i:s a") . "</span>";

    ?>
     </h2>

  </body>

</html>
```

OUTPUT:



Display Current Date & Time

The time from the server is 06:39:52am
Today's Date is 19-07-2018 and Current Time is 10:09:52 am

8.Write the PHP Programs to do the following
a) Implement simple calculator operations.

Program:

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <title></title>
  </head>
  <body>
    <h1>Simple Calculator Using PHP</h1>
    <form action="pgm8a.php" method="post">
      <table>
        <tr><td>Enter First Number: </td><td><input type="text" name="first" required autocomplete="off"/></td></tr>
        <tr><td>Enter Second Number: </td><td><input type="text" name="second" required autocomplete="off"/></td></tr>
        <tr><td>Select Operator: </td><td>
            <select name="op">
              <option>Select Operation</option>
              <option value="+">Addition</option>
              <option value="-">Subtraction</option>
              <option value="*">Multiplication</option>
              <option value="/">Division</option>
              <option value="%">Remainder</option>
            </select>
          </td></tr>
<tr><td colspan="2"><input type="submit"name="pop"  value="PerformOperation"/></td></tr>
      </table>
    </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 + $num2;
            echo"<h1>Additionof2Numbers:".$result."</h1>";
            break;
        case '-' : $result = $num1 - $num2;
            echo"<h1>Subtractionof2Numbers:".$result."</h1>";
            break;
        case '*' : $result = $num1 * $num2;
```

```
            echo"<h1>Productof2Numbers:".$result."</h1>";
            break;
        case '/' : $result = $num1 / $num2;
            echo"<h1>Divisionof2Numbers:".$result."</h1>";
            break;
        case '%' : $result = $num1 % $num2;
            echo"<h1>Remainderof2Numbers:".$result."</h1>";
            break;
        default : echo "<h1 style='color:red;'>Sorry, No Operation Found</h1>";
            break;
      }
    }
    ?>
  </body>
</html>
```

OUTPUT:

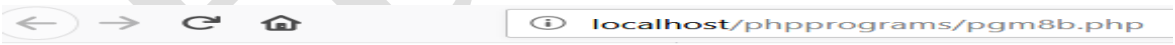
b) Transpose of amatrix

c) Addition of matrix and multiplication of two matrices. Program:

```
<?php
header('Content-Type: text/plain'); //without this header "\t and \n" wont work
// transpose matrix
$matrix1 = array(array(1, 2), array(4, 5));
$matrix2=array(array(1,2),array(4,5));
echo"\n\n\n";
echo"TheorderofthematrixAis:".count($matrix1)."x".count($matrix1[0]);
echo"\n";
echo"TheorderofthematrixBis:".count($matrix2)."x".count($matrix2[0]);
echo"\n";
$rowCount = count($matrix1); //Provides the rowcount of matrix
$colCount=count($matrix1[0]);//Providesthecolumncountofmatrix
echo "The input matrix Ais:\n";
for($r=0;$r<$rowCount;$r++){
  for($c=0;$c<$colCount;$c++){
    echo $matrix1[$r][$c] . " \t";
  }
  echo "\n";
}
echo "The input matrix B is:\n";
for($r=0;$r<$rowCount;$r++){
  for($c=0;$c<$colCount;$c++){
    echo$matrix2[$r][$c]."\t";
  }
  echo "\n";
}

//The transpose of the matrix
echo"\nTheoutputTransposeofmatrixis:\n";
for($r=0;$r<$colCount;$r++){
  for($c=0;$c<$rowCount;$c++){
    echo$matrix1[$c][$r]."\t";
  }
  echo "\n";
}
$rowCount = count($matrix1); //Provides the rowcount of matrix
$colCount = count($matrix1[0]); //Provides the column count of matrix
$rowCount2 = count($matrix2);
$colCount2 = count($matrix2[0]);

//The sum of the matrix
echo "\nThe sum of matrix is:\n";

for($r=0;$r<$rowCount;$r++){
```

```
   for ($c = 0; $c < $colCount; $c++) {

      $val=$matrix1[$r][$c]+$matrix2[$r][$c];
      echo $val ."\t";
   }
   echo "\n";
}
$rowCount = count($matrix1); //Provides the rowcount of matrix
$colCount = count($matrix1[0]); //Provides the column count of matrix
$rowCount2 = count($matrix2);
$colCount2 =count($matrix2[0]);

//TheMultiplicationofthematrix
echo "\nThe Multiplication of matrix is:\n";
//A*B C*D
//B is not equal to C
if($colCount == $rowCount2)
{
for($r = 0;$r < $rowCount;$r++)
{
for($c = 0;$c < $colCount;$c++)
{
$val=$matrix1[$r][$c]*$matrix2[$r][$c];
echo$val."\t";
}
echo "\n";
}
} else {
   echo "The matrix multiplication is not possible.";
}
?>
```

Output:




```
The order of the matrix A is:2x2
The order of the matrix B is:2x2
The input matrix A is:
1       2
4       5
The input matrix B is:
1       2
4       5

The output Transpose of matrix is:
1       4
2       5

The sum of matrix is:
2       4
8       10

The Multiplication of matrix is:
1       4
16      25
```

9. Write a PHP program named states. py that declares some variable states with the value"MississippiAlabamaTexasMassachusettsKansas".

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.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.

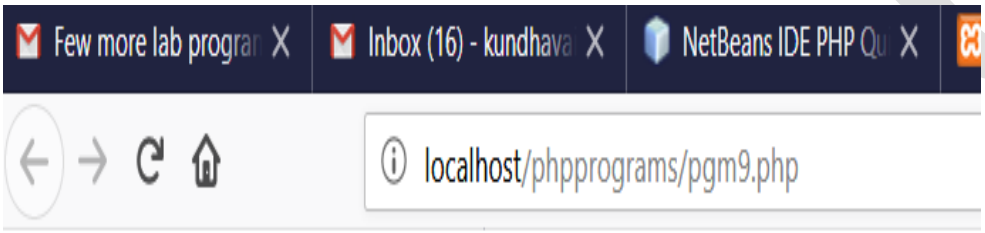
d. Search for a word in states that ends in a. Store this word in element 3 of the list.

Program:

```
<?php
header('Content-Type: text/plain');
$allTheStates = "Mississippi Alabama Texas Massachusetts Kansas";
$statesArray = [];
$states1 = explode(' ', $allTheStates);
$i = 0;
//states that ends in xas
foreach($states1as$state){
   if (preg_match('/xas$/', ($state))) {
      $statesArray[$i] = ($state);
      $i = $i + 1;
      print "\nThe 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 "\nThe states that begins with k and ends in s:" . $state;
   }
}
//statesthatbeginswithManden
dsins foreach($states1 as
$state){
if (preg_match('/^M.*s$/', ($state))) {
   $statesArray[$i] = ($state);
   $i = $i + 1;
   echo "\nThe 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 "\nThe states that ends in a:" . $state;
}
}
foreach ($statesArray as $element => $value) {
   print("\n".$value."istheelement".$element);
}
?>
```

Output:




```
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. Writea PHP program to sort the student records which are stored in the database using selection sort.

Goto Mysql and then type
create database weblab; use
weblab;
create table student(usnvarchar(10),name varchar(20),address varchar(20));

```
<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=[];
// 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 student";
// 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>Address</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>". $row["addr"]."</td></tr>";
array_push($a,$row["usn"]);
}
}
else
echo "Table is Empty";
echo "</table>";
$n=count($a);
$b=$a;
for ( $i = 0 ; $i< ($n - 1) ; $i++ )
{
$pos= $i;
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["addr"];
}
}
}
```

```
}
echo "<br>";
echo "<center> AFTER SORTING <center>";
echo "<table border='2'>";
echo "<tr>";
echo "<th>USN</th><th>NAME</th><th>Address</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**	**ADDRESS**
3BK10	**SACHIN**	**BASVAKALYAN**
3BK01	**ABHI**	**BASAVAKALYAN**
3BK05	**MANOJ**	**HUMNABAD**
AFTER SORTING		
3BK01	**ABHI**	**BASAVAKALYAN**
3BK05	**MANOJ**	**HUMNABAD**
3BK10	**SACHIN**	**BASVAKALYAN**