


CMR Institute of Technology, Bangalore			
Department: Computer Science and Engineering			
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Subject: Web Technology and its applications		Code: 18CS63	
Experiments Executed - Record			
Course duration: 4- Apr-2022 –16 <sup>th</sup> July 2022			
Faculty: Mrs. MANJULA, ASST PROF(CSE)			
Dates of Submission: _____			

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Final Marks obtained: _____/20
Signature of Teacher _____
HOD

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## Prescribed List of Experiments during class Web Technology and its application- 18CS63

S.N.	Date	Experiment	Marks in 100	Signature of Faculty
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 and outputs HTML text that displays the resulting values in an HTML table format.		
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 TEXTSHRINKING” in BLUE color. Then the font size decreases to 5pt.		
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		
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, Programme, 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 display this count of visitors, with proper headings.		
7		Write a PHP program to display a digital clock which displays the current time of the server.		
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.		

9		<p>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:</p> <ol style="list-style-type: none"> <li>Search for a word in variable states that ends in xas. Store this word in element 0 of a list named statesList.</li> <li>Search for a word in states that begins with k and ends in s. Perform a case-insensitive comparison. [Note: Passing re.I as a second parameter to method compile performs a case-insensitive comparison.] Store this word in element1 of statesList.</li> <li>Search for a word in states that begins with M and ends in s. Store this word in element 2 of the list.</li> <li>Search for a word in states that ends in a. Store this word in element 3 of the list.</li> </ol>		
10		Write a PHP program to sort the student records which are stored in the database using selection sort.		

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

## Program1.php

```
<html>
  <title>CALCULATOR</title>
  <style>
    input{ width:100%; padding:40px; } input:hover{ background:
silver;}  </style>
  <body>
    <div align="center">
      <h2>SIMPLE CALCULATOR</h2>
      <script type="text/javascript">
        a = ['1','2','3','+','4','5','6','-','7','8','9','*','C','0','=','/']      z = '
      <td> <input type="button"
value=""          document.write('<form name="cal"><table><tr><td colspan="8"> <input type="text"
name="get"></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.get.value
=eval(cal.get.value)"></td>');          continue ;
        }
if(i==3||i==7||i==11)
        {
          document.write(z+a[i]+" onclick="cal.get.value +=\""+a[i]+"\"></td></tr><tr
rowspan="2">');          continue ;
        }
else
          document.write(z+a[i]+" onclick="cal.get.value +=\""+a[i]+"\"></td>');
        }
      document.write('</table></form></div>');
    </script>
  </body>
</html>
```

Output

SIMPLE CALCULATOR

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

**Experiment 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.php**

```
<!DOCTYPE HTML>
<html>
<head> <style>
table,tr,
td {
border: solid black; width:
33%; text-align: center;
border-collapse: collapse;
background-color:lightblue;
}
table { margin: auto;
} </style>
<script>
document.write( "<table><tr><th colspan='3'> NUMBERS FROM 0 TO 10 WITH THEIR SQUARES AND CUBES
</th></tr>" );
document.write( "<tr><th>Number</th><th>Square</th><th>Cube</th></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>
</head>
</html>
```

Output:

**SQUARES AND CUBES FROM 0 TO 10**

Number	Square	Cube
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

---

**Experiment 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 TEXTSHRINKING” in BLUE color. Then the font size decreases to 5pt.**

#### **Program3.php**

```
<!DOCTYPE HTML>
<html>
<head> <style> p { position:
absolute; top: 50%; left: 50%;
transform: translate(-50%, -50%);
}
</style> </head>
<body>
<p id="demo"></p>
<script>
var var1 = setInterval(inTimer, 1000); var fs
= 5; var ids =
document.getElementById("demo");
function inTimer() {
ids.innerHTML = "TEXT GROWING";
ids.setAttribute('style', "font-size: " + fs + "px; color: red");
fs += 5; if(fs >= 50 ){ clearInterval(var1); var2 =
setInterval(deTimer, 1000);
}

}
function deTimer() {
fs -= 5;
ids.innerHTML = "TEXT SHRINKING";
ids.setAttribute('style', "font-size: " + fs + "px;
color: blue"); if(fs === 5 ){ clearInterval(var2);
}
}
</script>
</body>

</html>
```

Output:

---

**TEXT-GROWING**

---

TEXT-SHRINKING

**Experiment 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**

**Output: The number with its digits in the reverse order**

Program4.php

```
<!DOCTYPE HTML>
<html>
<body>
<script type="text/javascript"> var str
= prompt("Enter the Input","");
if(!isNaN(str))
{
var num,rev=0,remainder;
num = parseInt(str);
while(num!=0) {
remainder = num%10; num
= parseInt(num/10); rev =
rev * 10 + remainder;
}
alert("Reverse of "+str+" is "+rev);
} else
{
str = str.toUpperCase(); for(var i = 0; i < str.length; i++) { var chr
= str.charAt(i); if(chr == 'A' || chr == 'E' || chr == 'I' || chr == 'O' ||
chr == 'U')break;
}
if( i < str.length ) alert("The position of the left most
vowel is "+(i+1)); else alert("No vowel found in the
entered string");
}
</script>
</body>
</html>
```



Output:

localhost says

Enter The Query

OK

Cancel

---

Entered Query : 12345  
Given Number In Reverse Order : 54321

---

localhost says

Enter The Query

OK

Cancel

---

The First Occurence Of Vowel is at : 3

**Experiment 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, Programme, 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.**

Program5.php

```
<?xml-stylesheet type="text/css" href="5.css" ?>
<!DOCTYPE HTML>
<html>
<head>
<h1> STUDENTS DESCRIPTION </h1>
</head>
<students>
<student>
<USN>USN : 1CR19CS166</USN>
<name>NAME : SRETA REDDY</name>
<college>COLLEGE : CMRIT</college>
<year>YEAR : 2020</year>
<e-mail>E-Mail :srre19cs@cmrit.ac.in </e-mail>
</student>
<student>
<USN>USN : 1CR19CS167</USN>
<name>NAME : SREYA TALASILA</name>
<college>COLLEGE : CMRIT</college>
<year>YEAR : 2020</year>
<e-mail>E-Mail :srta19cs@cmrit.ac.in </e-mail>
</student>
<student>
<USN>USN : 1CR19CS165</USN>
<name>NAME : SREE RAKSHA</name>

<college>COLLEGE : CMRIT</college>
<year>YEAR : 2020</year>
<e-mail>E-Mail :srja19cs@cmrit.ac.in </e-mail>
</student>
</students>

</html>
```

Program5.css

```
student{ display:block; margin-top:10px;
color:Navy;
}
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;
} e-mail{ display:block; margin-left:20px;font-size:12pt;
color:Blue;

}
```

Output:

```
USN: 1CR19CS166
NAME: SREYA REDDY
COLLEGE: CMRIT
YEAR: 2020
E-MAIL:srre19cs@cmrit.ac.in
USN: 1CR19CS167
NAME:SREYA TALASILA
COLLEGE: CMRIT
YEAR: 2020
E-MAIL:srta19cs@cmrit.ac.in
USN: 1CR19CS165
NAME:SREE RAKSHA
COLLEGE: CMRIT
YEAR: 2020
E-MAIL:srje19cs@cmrit.ac.in
```

**Experiment 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**

```
<?php
print "<h3> REFRESH PAGE </h3>";
$name="counter.txt";
$file = fopen($name,"r"); $hits=
fscanf($file,"%d");
fclose($file);
$hits[0]++;
$file = fopen($name,"w");
fprintf($file,"%d",$hits[0]); fclose($file);
print "The number Of users visited: ".$hits[0];
?>
```

Output:

**REFRESH PAGE**

The number of users visited : 3

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

**program7.php**

```
<head>
<meta http-equiv="refresh" content="1"/>
<style> p { color:yellow;
font-size:90px; position:absolute;
top: 40%; left: 50%; transform:
translate(-50%, -50%);
} body { background-
color:maroon;
}
</style>
<p> <?php echo date(" h: i : s A");?> </p>
</head>
```

Output:



10: 43 : 54 AM

## Experiment 8: Write the PHP programs to do the following:

- d. Implement simple calculator operations.
  - e. Find the transpose of a matrix.
  - f. Multiplication of two matrices.
- d.Addition of two matrices.**

Program8a.php

```
<html>
<head> <style> table,
td, th { border: 1px
solid black; width:
35%; text-align: center;
background-color: lightgray;
}
table { margin: auto; }
input,p { text-align:right; }
</style>
</head>

<body>
<form method="post" action="prog8a.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>
</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>

```

Output:

## SIMPLE CALCULATOR

First Number:	<input type="text" value="21"/>	<input type="button" value="Calculate"/>
Second Number:	<input type="text" value="07"/>	
Addition :	<input type="text" value="28"/>	
Subtraction :	<input type="text" value="14"/>	
Multiplication :	<input type="text" value="147"/>	
Division :	<input type="text" value="3"/>	

prog8b.php

```

<!DOCTYPE html>
<html>
<body> <?php
function pr($a){
foreach ($a as $b) {
foreach ($b as $c) {
echo $c ." ";    }echo
"<br>";
    }echo "<br>";
}
$a = [[1,2,3],[4,5,6],[7,8,9]]; $b =
[[7,8,9],[4,5,6],[1,2,3]]; echo "<b>First
Matrix : </b><br>" ; pr($a); echo
"<b>Second Matrix : </b><br>"; pr($b);
    for ($i=0; $i < 3; $i++)    for ($j=0; $j < 3; $j++)
$c[$i][$j] = $a[$j][$i]; echo "<b>Transpose Of First
Matrix : </b><br>"; pr($c);
    for ($i=0; $i < 3; $i++)    for ($j=0; $j < 3; $j++)
$c[$i][$j] = $a[$i][$j] + $b[$i][$j]; echo "<b>Addition
Of Two Matrix : </b><br>"; pr($c);
    for ($i=0; $i < 3; $i++)
for ($j=0; $j < 3; $j++){
$c[$i][$j] = 0;    for
($k=0; $k < 3; $k++)
    $c[$i][$j] += $a[$i][$k] * $b[$k][$j];

```

```
}  
echo "<b>Multiplication Of Two Matrix : </b><br>"; pr($c);  
?>  
</body>  
</html>  
Output:
```

**First Matrix :**

1 2 3  
4 5 6  
7 8 9

**Second Matrix :**

7 8 9  
4 5 6  
1 2 3

**Transpose Of First Matrix :**

1 4 7  
2 5 8  
3 6 9

**Addition Of Two Matrix :**

8 10 12  
8 10 12  
8 10 12

**Multiplication Of Two Matrix :**

18 24 30  
54 69 84  
90 114 138



**Experiment 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 case-insensitive comparison. [Note: Passing re.I as 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. Search for a word in states that ends in a. Store this word in element 3 of the list.**

## **P**

Program9.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);
      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>
```

Output:

ORIGINAL ARRAY :

states[0] = Mississippi

states[1] = Alabama

states[2] = Texas

states[3] = Massachusetts

states[4] = Kansas

RESULTANT ARRAY :

statesList[0] = Texas

statesList[1] = Kansas

statesList[2] = Massachusetts

statesList[3] = Alabama

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

```
<?php
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "weblab";
    $conn = mysqli_connect($servername, $username, $password, $dbname);
if (!$conn) {    die("Connection failed: " . mysqli_connect_error());
    }
    $sql = "SELECT * FROM student";
    $result = $conn->query($sql);
    $usn = array() ;
    echo "<table border='2'><caption>Before Sorting </caption><br>";
echo    "<tr><th>USN</th><th>NAME</th><th>Marks</th></tr>";
if ($result->num_rows > 0)
    {
        while($row = $result->fetch_assoc())
        {
            echo "<tr><td>". $row["usn"]."</td>";
echo "<td>". $row["name"]."</td>";        echo
"<td>". $row["marks"]."</td></tr>";
            $usn[] = $row["usn"] ;
        }
    }
    $n = sizeof($usn) ;
    for($i = 0 ; $i < $n-1 ; $i++ )
    {
        $pos = $i ;
        for($j = $i + 1 ; $j < $n ; $j++ )
        {
```

```

        if( $usn[$pos] < $usn[$j])
        {
            $pos = $j ;
        }
    }

    if( $pos != $i)
    {
        $temp = $usn[$i] ;
        $usn[$i] = $usn[$pos] ;
        $usn[$pos] = $temp ;
    }
}

$name = [] ;
$marks = [] ;
$result = $conn->query($sql);
if ($result->num_rows > 0)
{
    while($row = $result->fetch_assoc())
    {
        for($i=0;$i<$n;$i++)
        {
            if($row["usn"] == $usn[$i])
            {
                $name[$i]=$row["name"];
                $marks[$i]=$row["marks"];
            }
        }
    }
}

echo "<br><table border='2'><caption>After Sorting </caption><br>";
echo "<tr><th>USN</th><th>NAME</th><th>Marks</th></tr>";
for($i = 0 ; $i < sizeof($usn) ; $i++)
{
    echo "<tr><td>". $usn[$i]. "</td>";
    echo "<td>". $name[$i]. "</td>";
    echo "<td>". $marks[$i]. "</td></tr>";
}

```

?>

Output:

Before Sorting

USN	NAME	Marks
3GN16cs044	Nisha	67
3GN16cs030	Manoj	87
3GN16cs002	Abhishek	97
3GN16cs014	Dhilip	77
3GN16cs023	Deepika	57

After Sorting

USN	NAME	Marks
3GN16cs044	Nisha	67
3GN16cs030	Manoj	87
3GN16cs023	Deepika	57
3GN16cs014	Dhilip	77
3GN16cs002	Abhishek	97

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