

Web Integrated Programs

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

Solution:

```
1. <html>
2. <head>
3. <title> Simple Calculator - Program 1</title>
4. <style>
5. input {
6.     background-color: #9d0e79;
7.     border: none;
8.     color: white;
9.     width: 100%;
10.    padding: 15px 32px;
11.    text-align: center;
12.    text-decoration: none;
13.    display: inline-block;
14.    font-size: 16px;
15.}
16.
17.</style>
18.
19.</head>
20. <body>
21.<center>
22.    <form name="calculator">
23.        <table>
24.            <tr>
25.                <td colspan="4">
26.                    <input type="text" name="display">
27.                </td>
28.            </tr>
29.            <tr>
30.                <td><input type="button" value="1"
31.                    onclick="calculator.display.value += '1'"></td>
32.                <td><input type="button" value="2"
33.                    onclick="calculator.display.value += '2'"></td>
34.                <td><input type="button" value="3"
35.                    onclick="calculator.display.value += '3'"></td>
36.                <td><input type="button" value="+"
37.                    onclick="calculator.display.value += '+'"></td>
38.            </tr>
39.        </table>
40.    </form>
41.</center>
42.</body>
43.</html>
```

```

36.         <td><input type="button" value="4"
    onclick="calculator.display.value += '4'"></td>
37.         <td><input type="button" value="5"
    onclick="calculator.display.value += '5'"></td>
38.         <td><input type="button" value="6"
    onclick="calculator.display.value += '6'"></td>
39.         <td><input type="button" value="-"
    onclick="calculator.display.value += '-'></td>
40.     </tr>
41.     <tr>
42.         <td><input type="button" value="7"
    onclick="calculator.display.value += '7'"></td>
43.         <td><input type="button" value="8"
    onclick="calculator.display.value += '8'"></td>
44.         <td><input type="button" value="9"
    onclick="calculator.display.value += '9'"></td>
45.         <td><input type="button" value="x"
    onclick="calculator.display.value += '*'></td>
46.     </tr>
47.     <tr>
48.         <td><input type="button" value="c"
    onclick="calculator.display.value = ''"></td>
49.         <td><input type="button" value="0"
    onclick="calculator.display.value += '0'"></td>
50.         <td><input type="button" value="="
    onclick="calculator.display.value =
    eval(calculator.display.value)"></td>
51.         <td><input type="button" value="/"
    onclick="calculator.display.value += '/'></td>
52.     </tr>
53. </table>
54. </form>
55. </center>
56. </body>
57.
58. </html>

```

Output:

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

- 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.

Solution:

```
<html>
<head>
<title>Program 2 - 0-10 Square and Cubes</title>
<script>
document.write( "<center><table> <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></center>" )
</script>
<style>
table {
    color: #333; /* Lighten up font color */
    font-family: Helvetica, Arial, sans-serif; /* Nicer font */
    width: 640px;
    border-collapse:
    collapse; border-spacing: 0;
}

td, th { border: 1px solid #CCC; height: 30px; } /* Make cells a bit taller */

th {
    background: #2676af; /* Light grey background */
    font-weight: bold; /* Make sure they're bold */
}
```

```

td {
    background: #FAFAFA; /* Lighter grey background */
    text-align: center; /* Center our text */
}
</style>
</head>
</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.

Solution:

```

<html>
<head>
<title> Program 3 JavaScript - Grow & Shrink Text</title>

<script>

var font = 0, loading;
function start()
{
    loading = window.setInterval("incr()", 100);
}

function incr() {
    font = font + 1;
    display.innerHTML = "TEXT-GROWING : " + font + "pt";
    display.style.fontSize = font + "pt";
    if (font > 50) {
        window.clearTimeout(loading);
        loading = window.setInterval("decr()", 100);
    }
    display.style.color = "red";
}

function decr() {
    font = font - 1;
    display.innerHTML = "TEXT-SHRINKING: " + font + "pt";
    display.style.fontSize = font + "pt";
    if (font == 5) {
        window.clearTimeout(loading);
    }
}

```

```

loading = window.setInterval("incr()", 100);
}
display.style.color = "blue";
}
</script>
</head>
<body style="background: #32c35f78;" onload="start()" >
<center>
<p style="margin-top:250px" id="display"></p>
</center>
</body>
</html>

```

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

Solution:’

```

<!DOCTYPE html>
<html>
<head>
<title>JavaScript Functions</title>
<style>
input[type=text]{
    width: 100%;
    padding: 12px 20px;
    margin: 8px 0;
    display: inline-block;
    border: 1px solid #ccc;
    border-radius: 4px;
    box-sizing: border-box;
}

input[type=submit] {
    width: 25%;
    background-color: #af4c55;
    color: white;
    padding: 14px 20px;
    margin: 8px 0;
    border: none;
    border-radius: 4px;
    cursor: pointer;
}

```

```

}
div{
    background-color: #d8bfbf;
    width: 50%;
    padding: 10px;
    border: 2px solid #ab9a9a;
}
</style>
</head>
<body style="background-color:#e0dcd5">
<main style="max-width: 900px; margin: auto;">
<center>

<input type="text" id="str" placeholder="Enter Sting/Number">
<input type="submit" onclick="evalinput();" value="Submit" name="sub">

</p>
<br/>
<h2 style="color:#af4c55">Result:</h2>
<div id="result"></div>
<script>
function evalinput() {
var str = document.getElementById("str").value;
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 = "<p>Reverse of: <strong> " +
str + " is " + rev +
"<strong></p>";
}
else {
var text = "<p>The Entered string is: <strong>" + str + "</strong><p>";
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 += "<p>The Leftmost Vowel is: <strong>" + str.charAt(i) +
"</strong><p>";
var pos = i+1;

```

```

text += "<p>The Position of the Leftmost Vowel: <strong> " + str.charAt(i) +
" is " + pos + "<strong><p/>";
document.getElementById("result").innerHTML = text;
exit;
}
}
text += "<p> The Entered String Has No Vowels</p>";
document.getElementById("result").innerHTML = text;
}
}
</script>
</center>
</main>
</body>
</html>

```

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.

Solution:

```

<?php
echo "<h1> REFRESH PAGE </h1>" ;
$file = 'count.txt' ;
$c = file_get_contents($file) ;
file_put_contents($file, $c+1);
echo "The number of users visited : ".$c ;
?>

```

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

Solution:

```

<?php
date_default_timezone_set('Asia/kolkata');
echo date(" d/m/y::h: i : s A");?>

```

8. Write the PHP programs to do the following:

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

Solution:

- Simple Calculator

```

b. <html>
c. <head>
d. <style>

```

```

e.  table, td, th {
f.    border: 1px solid black;
g.    width: 35%;
h.    text-align: center;
i.    background-color: lightgray;
j.  }
k.  table { margin: auto; }
l.  input, p { text-align: right; }
m. </style>
n. </head>
o.
p. <body>
q. <form method="post" action="simple_cal.php">
r.   <table>
s.     <caption><h2> SIMPLE CALCULATOR </h2></caption>
t.     <tr>
u.       <td>First Number:</td><td><input type="text" name="num1" /></td>
v.       <td rowspan="2"><button type="submit" name="submit"
        value="calculate">Calculate</td></tr>
w.     <tr>
x.       <td>Second Number:</td><td><input type="text" name="num2"/></td>
y.     </tr>
z.   </form>
aa.
bb. <?php
cc. if(isset($_POST['submit'])) // it checks if the input submit is filled
dd. {
ee.   $num1 = $_POST['num1'];
ff.   $num2 = $_POST['num2'];
gg.   if(is_numeric($num1) and is_numeric($num2) )
hh.   {
ii.     echo "<tr><td> Addition :</td><td><p>".($num1+$num2)."</p></td>";
jj.     echo "<tr><td> Subtraction :</td><td><p> ".($num1-
        $num2)."</p></td>";
kk.     echo "<tr><td> Multiplication
        :</td><td><p>".($num1*$num2)."</p></td>";
ll.     echo "<tr><td>Division :</td><td><p> ".($num1/$num2)."</p></td>";
mm.     echo "</table>";
nn.   }
oo.   else
pp.   {
qq.     echo"<script> alert(' ENTER VALID NUMBER');</script>";
rr.   }
ss. }
tt. ?>
uu.</body>
vv.</html>

```


b. Transpose

```
<?php
$trans = array(
    array(1, 2,9),
    array(3, 4,9),
    array(5, 6,9)
);
echo "<h2> Matrix </h2>";
for ($row = 0; $row < 3; $row++) {
    echo "<br>";
    for ($col = 0; $col < 3; $col++) {
        echo " ".$trans[$row][$col];
    }
}
echo "<h2> Transpose of Matrix </h2>";
for ($row = 0; $row < 3; $row++) {
    echo "<br>";
    for ($col = 0; $col < 3; $col++) {
        echo " ".$trans[$col][$row];
    }
}
?>
```

c. Multiplication

```
<?php
$mat1 = Array('0' => Array('0' => 2, '1' => 4), '1' => Array('0' => 3, '1' => 4));
$mat2 = Array('0' => Array('0' => 1, '1' => 2), '1' => Array('0' => 3, '1' => 4));

$result = array();

for($i=0; $i<=1; $i++) {
    for($j=0; $j<=1; $j++) {
        $result[$i][$j] = 0;
        for ($k = 0; $k <=1; $k++)
            $result[$i][$j] += $mat1[$i][$k] * $mat2[$k][$j];
    }
}

echo "<p> matrix one </p>";
echo "<pre/>";print_r($mat1);
echo "<p> matrix Two</p>";
```

```

echo "<pre/>";print_r($mat2);
echo "<p> matrix Multiplication</p>";
echo "<pre/>";print_r($result);
?>

```

d. Addition

```

<?php
$a1 = Array('0' => Array('0' => 1, '1' => 2), '1' => Array('0' => 4, '1' => 5));
$a2 = Array('0' => Array('0' => 1, '1' => 2), '1' => Array('0' => 4, '1' => 5));
$sumArray = array();
$result = array();
for($i=0; $i<=1; $i++) {
    for($j=0; $j<=1; $j++) {
        $result[$i][$j] = $a1[$i][$j] + $a2[$i][$j];
    }
}
echo "<p> matrix one </p>";
echo "<pre/>";print_r($a1);
echo "<p> matrix Two</p>";
echo "<pre/>";print_r($a2);
echo "<p> matrix Addition</p>";
echo "<pre/>";print_r($result);
?>

```

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:

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

Solution:

```

<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>

```

- 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.

Solution:

```

<?xml version="1.0" encoding="UTF-8"?>
  <?xml-stylesheet type="text/css" href="pro5.css" ?>
  <students>
    <student>
      <USN>USN : 4VV20CS001</USN>
      <name>NAME : XYZ</name>
      <college>COLLEGE : VVCE</college>
      <branch>BRANCH : Computer Science and Engineering</branch>
      <year>YEAR : 2020</year>
      <e-mail>E-Mail : 2020@gmail.com</e-mail>
    </student>
  <br />
  <br />
    <student>
      <USN>USN : 4VV20CS001</USN>
      <name>NAME : XYZ</name>
      <college>COLLEGE : VVCE</college>
      <branch>BRANCH : Computer Science and Engineering</branch>
      <year>YEAR : 2020</year>
      <e-mail>E-Mail : 2020@gmail.com</e-mail>
    </student>

    <student>
      <USN>USN : 4VV20CS001</USN>
      <name>NAME : XYZ</name>
      <college>COLLEGE : VVCE</college>
      <branch>BRANCH : Computer Science and Engineering </branch>
      <year>YEAR : 2020</year>
      <e-mail>E-Mail : 2020@gmail.com</e-mail>
    </student>

```

```
</students>
```

Prog5.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;
}
students{
max-width:30%;margin:auto; background-color: #cdd864;
}
```

Output:

USN : 4VV20CS001
NAME : XYZ
COLLEGE : VVCE
BRANCH : Computer Science and
Engineering
YEAR : 2020
E-Mail : 2020@gmail.com

USN : 4VV20CS002
NAME : PQR
COLLEGE : VVCE
BRANCH : Computer Science and
Engineering
YEAR : 2020
E-Mail : 2020@gmail.com

USN : 4VV20CS003
NAME : ABC
COLLEGE : VVCE
BRANCH : Computer Science and
Engineering
YEAR : 2020
E-Mail : 2020@gmail.com

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

Solution:

```
<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 = "Sort";
$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>". $row["Semester"]. "</td></tr>";
array_push($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]=$row["Semester"];
        }
    }
}
echo "<br>";
echo "<center> AFTER SORTING <center>";
echo "<table border='2'>";
echo "<tr>";
echo "<th>USN</th><th>NAME</th><th>Address</th></tr>";
for($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	SEM
4VV19CS001	XYZ	6
4VV19CS001	XYZ	6
4vv19cs009	ABC	6
4vv19cs012	Ram	6
4vv19cs004	Krishna	6
4vv19cs020	Harry	6

AFTER SORTING

USN	NAME	Address
4VV19CS001	XYZ	6
4VV19CS001	XYZ	6
4vv19cs004	Krishna	6
4vv19cs009	ABC	6
4vv19cs012	Ram	6
4vv19cs020	Harry	6