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

<!DOCTYPE html>

<html>

<head>

<title>calculator-javascript and HTML</title>

<link rel="stylesheet" href="1a.css"></head>

<body>

<div id='calc-contain'>

<form name="calculator">

<input type="text"name="answer"/>

</br>

<input type="button" value="1" onclick="calculator.answer.value+='1'"/>

<input type="button" value="2" onclick="calculator.answer.value+='2'"/>

<input type="button" value="3" onclick="calculator.answer.value+='3'"/>

<input type="button" value="+" onclick="calculator.answer.value+='+'"/>

</br>

<input type="button" value="4" onclick="calculator.answer.value+='4'"/>

<input type="button" value="5" onclick="calculator.answer.value+='5'"/>

<input type="button" value="6" onclick="calculator.answer.value+='6'"/>

<input type="button" value="-" onclick="calculator.answer.value+='-'"/>

</br>

<input type="button" value="7" onclick="calculator.answer.value+='7'"/>

<input type="button" value="8" onclick="calculator.answer.value+='8'"/>

<input type="button" value="9" onclick="calculator.answer.value+='9'"/>

<input type="button" value="\*" onclick="calculator.answer.value+='\*'"/>

</br>

<input type="button" value="C" onclick="calculator.answer.value = '' " id="clear" >

<input type="button" value="0" onclick="calculator.answer.value+='0"'/>

<input type="button" value="=" onclick="calculator.answer.value=eval(calculator.answer.value)"/>

<input type="button" value="/" onclick="calculator.answer.value+='/'"/>

</br>

</form>

<div id="agn">

</div>

</div>

</body>

</html>

1a.css

#calc-contain{

position:relative;

width:400px;

border:2px solid black;

border-radius:12px;

margin:0px auto;

padding:20px 20px 100px 20px;

}

#agh{

position:relative;

float:right;

margin-top:15px;

}

#agh p{

font-size:20px;

font-weight:900;

}

input[type=button]{

background;

lightGray; width:20%;

font-size:20px;

font-wight:900;

border-radius:7px;

margin-left:13px;

margin-top:10px;

}

input[type=button]:active{

background-color:#3e8e41;

box-shadow:0 5px #666;

transform:traslate Y (4px);

}

input[type=button]:hover{

background-color:#003300;

color:white;

}

input[type=text] {

position:relative;

display:block;

width:90%;

margin:5px auto;

font-size:20px;

padding:10px;

box-shadow:4px 0px 12px black inset;

}

**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>

<script>

document.write ('<h1 align="right">Squares and Cubehsof the numbers from 0 to 10</h1>');

document.write ('<center><table width="30%" border="1" bgcolor="white">');

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>

**3.Write JavaScript to validate the following fields of the Registration page.**

**a. First Name (Name should contains alphabets and the length should not be less than 6 characters).**

**b. Password (Password should not be less than 6 characters length).**

**c. E-mail id (should not contain any invalid and must follow the standard pattern** [**name@domain.com**](mailto:name@domain.com)**)**

**d. Mobile Number (Phone number should contain 10 digits only).**

**e.Last Name and Address (should not be Empty).**

Valid.js

function fun()

{

var userv=document.forms[0].user.value;

var pwdv=document.forms[0].pwd.value;

var emailv=document.forms[0].email.value;

var phv=document.forms[0].ph.value;

var userreg=new RegExp("^[a-zA-Z][a-zA-Z0-9]\*$");

var emailreg=new RegExp("^[a-zA-Z][a-zA-Z0-9\_.]\*@[a-zA-Z][a-zA-Z0-9\_.]\*.[a-zA-Z][a-zA-Z0-9\_.]{2}.[a-zA-Z][a-zA-Z0-9\_.]{2}$|^[a-zA-Z][a-zA-Z0-9\_.]\*@[a-zA-Z][a-zA-Z0-9\_.]\*.[a-zA-Z][a-zA-Z0-9\_.]{3}$");

var phreg=new RegExp("^[0-9]{10}$");

var ruser=userreg.exec(userv);

var remail=emailreg.exec(emailv);

var rph=phreg.exec(phv);

if(ruser && remail && rph && (pwdv.length > 6))

{

alert("All values are valid");

return true;

}

else

{

if(!ruser) { alert("username invalid");document.forms[0].user.focus();}

if(!remail) { alert("password invalid");document.forms[0].user.focus();}

if(!rph) { alert("phone number invalid");document.forms[0].ph.focus();}

if(pwdv.length < 6) { alert("password invalid");document.forms[0].pwd.focus();}

return false;

}

}

Register.html

<html>

<body>

<center>

<fieldset>

<legend>Registration</legend>

<form action="Database" method="get" onSubmit="return fun()">

<pre>

Name :<input type="text" name="user" size="10"><br>

Password :<input type="password" name="pwd" size="10"><br>

E-mail :<input type="text" name="email" size="10"><br>

Phone Number :<input type="text" name="ph" size="10"><br>

<input type="submit" value="Register">

</pre>

</form>

</body>

<script src="valid.js"></script>

</html>

**4.Write an HTML page including any required JavaScript that takes a number from one text field in the range of 0 to 999 and shows it in another text field in words. if the number is out of range, it should show “out of range” and if it is not a number, it should show “not a number” message in the result box**

<html>

<head>

<title>Number in words</title>

<script language="javascript">

function convert()

{

var num=document.forms["frm1"].num.value;

document.forms["frm1"].words.value="";

if(isNaN(num))

{

alert("Not a Number");

}

else if (num<0 || num>999)

{

alert("Out of Range");

}

else

{

var len=num.length;

var words="";

for(var i=0;i<len;i++)

{

var n=num.substr(i,1);

switch(n)

{

case '0':words+="Zero ";break;

case '1':words+="One ";break;

case '2':words+="Two ";break;

case '3':words+="Three ";break;

case '4':words+="Four ";break;

case '5':words+="Five ";break;

case '6':words+="Six ";break;

case '7':words+="Seven ";break;

case '8':words+="Eight ";break;

default:words+="Nine ";

}

}

document.forms["frm1"].words.value=words;

}

}

</script>

</head>

<body>

<form name="frm1">

<center><h3>NUMBER IN WORDS</h3></center>

<br/>

<center>Enter a Number :<input type="text" name="num"</input><br/></center>

<br/>

<center><input type="button" name="inwords" value="In Words" onclick="convert()"></input></center>

<br/><br/><center>Number in Words :<input type="text" name="words"</input></center>

<br/>

</form>

</body>

</html>

**5. 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.**

<!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, 100);

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>

**6 a. Install and configure PHP.web server ,MYSQL.**

1. **Visit** [**https://www.apachefriends.org/download.html**](https://www.apachefriends.org/download.html) **and install XAMPP control penal .**
2. **Start Apachee local server and MYSQL**
3. **Visit C:\xampp\htdocs and write PHP program with extension of .php (using note pad).**

**b. Write a program to print “Wel come to PHP”.**

**<?php**

**echo "Well come to php";**

**?>**

**c. Write a simple PHP program using expressions and operators.**

**<?php**

**$x = 10;**

**$y = 4;**

**echo($x + $y) . "<br>";**

**echo($x - $y) . "<br>";**

**echo($x \* $y) . "<br>";**

**echo($x / $y) . "<br>";**

**echo($x % $y) . "<br>";**

**?>**

**7.Develop and demonstrate PHP Script for the following problems:**

**a) Write a PHP Script to find out the Sum of the Individual Digits.**

**<?php**

**Function sumOfDigits($number)**

**{**

**$sum = 0;**

**while ($number != 0)**

**{**

**$digit = $number % 10;**

**$sum += $digit;**

**$number = (int)( $number / 10);**

**}**

**Return $sum;**

**}**

**$number = 12345;**

**echo "the sum of digits of $number is :". sumOfDigits($number);**

**?>**

**b) Write a PHP Script to check whether the given number is Palindrome or not**

<form method="post">

Enter a Number: <input type="text" name="num"/><br>

<button type="submit">Check</button>

</form>

<?php

if($\_POST)

{

//get the value from form

$num = $\_POST['num'];

//reversing the number

$reverse = strrev($num);

//checking if the number and reverse is equal

if($num == $reverse){

echo "The number $num is Palindrome";

}

else

{

echo "The number $num is not a Palindrome";

}

}

?>

8. 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

session\_start();

if(isset($\_SESSION[ 'visitor' ]))

$\_SESSION[ 'visitor' ]=$\_SESSION[ 'visitor' ]+1;

else

$\_SESSION[ 'visitor' ]=1;

echo "no of visitors =" . $\_SESSION[ 'visitor' ];

?>

**9. Write a PHP Program to display current Date, Time and Day.**

**<?php**

**echo "current date,time and day is:";**

**$myDate=date("d.m.y h:i:s/D");**

**echo $myDate;**

**?>**

**10. 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.**

<!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>

**11. 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 . Srores this word in element 0 of list named stateList.**

**search for the word in the state that begins with k and ends in perform a case insensitive comparison. Store this word in the element of 1 stateList.**

**c. Search for 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.**

<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>

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

<?php

function selection\_sort($data)

{

for($i=0; $i<count($data)-1; $i++) {

$min = $i;

for($j=$i+1; $j<count($data); $j++) {

if ($data[$j]<$data[$min]) {

$min = $j;

}

}

$data = swap\_positions($data, $i, $min);

}

return $data;

}

function swap\_positions($data1, $left, $right) {

$backup\_old\_data\_right\_value = $data1[$right];

$data1[$right] = $data1[$left];

$data1[$left] = $backup\_old\_data\_right\_value;

return $data1;

}

$my\_array = array(3, 0, 2, 5, -1, 4, 1);

echo "Original Array :\n";

echo implode(', ',$my\_array );

echo "\nSorted Array :\n";

echo implode(', ',selection\_sort($my\_array)). PHP\_EOL;

?>

**13. Write a PHP program for sending and receiving plain text message (email).**

<html>

<head>

<title>Sending HTML email using PHP</title>

</head>

<body>

<?php

$to = "xyz@somedomain.com";

$subject = "This is subject";

$message = "<b>This is HTML message.</b>";

$message .= "<h1>This is headline.</h1>";

$header = "From:abc@somedomain.com \r\n";

$header .= "Cc:afgh@somedomain.com \r\n";

$header .= "MIME-Version: 1.0\r\n";

$header .= "Content-type: text/html\r\n";

$retval = mail ($to,$subject,$message,$header);

if( $retval == true ) {

echo "Message sent successfully...";

}else {

echo "Message could not be sent...";

}

?>

</body>

</html>