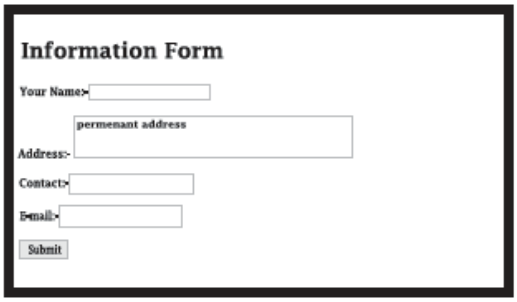
Lesson-2 Project Activity (Advance Java Script)

SOP 1 : Create a web page in HTML having a white background and two Button Objects. Write code using JavaScript such that when the mouse is placed over the first button object without clicking, the color of the background of the page should change after every __ seconds. There should at least be 7 different and visibly distinct background colors excluding the default color. When the second button object is clicked, appropriate message should be displayed in Browsers status bar.

Create another web page using JavaScript where the background color changes automatically after every ___ seconds. This event must be triggered automatically after the page gets loaded in the browser. There should at least be 7 different and visibly distinct background colors. When the page is unloaded, the appropriate alert message should be displayed.

SOP 2 : Create JavaScript program for the following form validations. Make use of HTML5 properties to do the following validations :

1) Name, address, contact number and email are required fields of the form.
2) Address field should show the hint value which will disappear when field gets focus or key press event.
3) Telephone number should be maximum 10 digit number only.
4) Email field should contain valid email address, @ should appear only once and not at the beginning or at end. It must contain at least one dot(.).
5) Make use of pattern attribute for email to accept lowercase, uppercase alphabets, digits and specified symbols.




```
<html>
<head><title>Student Form</title></head>
<body>
<h1>Student Information</h1>

<form name="forml">
Enter Name: <input type="text" name="t1">
<br><br>
Enter Address:
<textarea name="t2" placeholder="RESIDENTIAL ADDRESS">
</textarea>
<br><br>
Enter Telehpone Number:
<input type="tel" maxlength="10">
<br><br>
Enter Email Address
<input type="email" name="t3" pattern="[A-Z,a-z]{5}-[@]{1}-[.]{1}"
placeholder="aus123@gmail.com">
<br><br>
<input type="button" name="b1" value="Submit" onClick="chk()">
</form>

<script type="text/javascript">
function chk()
{
var x=form1.t3.value;
var atpos=x.indexOf("@");
```

```
var lastat=x.lastIndexOf("@");
var firstdot=x.indexOf(".");
var dotpos =x.lastIndexOf(".");
if(atpos<1 || dotpos<atpos+2 || dotpos+2>=x.length || firstdot<atpos ||
atpos<lastat)
{
alert("Not a valid email address");
form1.t3.focus();
}
else
{
alert("Email address is accepted");
return true;
}
</script>
</body>
</html>
```

SOP 3 : Create event driven JavaScript program for the following. Make use of appropriate variables, JavaScript inbuilt string functions and control structures.

- To accept string from user and count number of vowels in the given string.

```
<!DOCTYPE html>
<html>
<head>
<title>
String functions
</title>
</head>

<body>
<center><br>
<h1>Counting No.of Vowels from the entered String</h1>

<form name="frm1">
Enter Your Name
<input type="text" name="t1"><br><br>
<input type="button" name="btncheck" value="Count Vowels"
onClick="cnt()">
</form>

<script >
function cnt()
{
var s,i,ch,c;
c=0;
s=frm1.t1.value;
```

```
for(i=0;i<=s.length;i++)
{
ch=s.charAt(i);
if(ch=="A" || ch=="a" || ch=="E" || ch=="e" || ch=="I" || ch=="i"
|| ch=="O"|| ch=="o" || ch=="U" || ch=="u")
c++;
}
alert("Number of Vowels in string are "+c);
}
</script>
</body>
</html>
```

SOP 4 : Create event driven JavaScript program for the following. Make use of appropriate variables, JavaScript inbuilt string functions and control structures.

- To accept string from user and reverse the given string and check whether it is palindrome or not.

```
<!DOCTYPE html>
<html>
<head>
<title></title>
</head>

<style>
h1{font-size:30px;font-style: justify;text-align:center;}
</style>

<body>
<center>
<form name="f1">
<br><br><h1>Enter the string to check <p>it is palindrome or not!</h1>
<br>
<input type="text" name="t1">
<br>
<br>
<input type="button" name="check_palin" value="Check
String" onclick="chk_palindrome()">
</form>
</center>

<script type="text/javascript">
function chk_palindrome()
{
var str,str_case,i,len;
str=f1.t1.value;
str_case=str.toLowerCase();
```

```
len=str_case.length;
var p=1;
for(i=0;i<len/2;i++)
{
  if(str_case.charAt(i)!=str_case.charAt(len-1-i))
  {
   p=0;
   break;
  }
}
if(p==1)
{
  alert("Entered string is Palindrome");
}
else
{
  alert("Entered string is Not a Palindrome")
}
}
</script>
</body>
</html>
```

SOP 5 : Create event driven JavaScript program to convert temperature to and from Celsius, Fahrenheit.

Formula: c/5= (f-32)/9

[where c=Temperature in Celsius and f=Temperature in Fahrenheit.]

Output format : 40 Celsius=104 Fahrenheit

45 Fahrenheit = 7.22222222 Celsius

```
<html>
<body>
<center>
<h2>Celsius to Fahrenheit</h2>
<p>Insert a number:</p>
<p><input type="text" id="c" onkeyup="convert('C')">Degree Celsius</p>
<p><input type="text" id="f" onkeyup="convert('F')">Degree
Fahrenheit</p>
<p>Note<b>Math.round()</b>method is used,so that the result will be
returned an integer.</p>
<script >
function convert(degree)
{
var x;
if(degree=="C")
{
x=document.getElementById("c").value*9/5+32;
```

```
document.getElementById("f").value=Math.round(x);
}
else
{
x=(document.getElementById("f").value-32)*5/9;
 document.getElementById("c").value=Math.round(x);
}
}
</script>
</center>
</body>
</html>
```

SOP 6 : Create JavaScript program which compute the average marks of students. Accept six subject marks of student from user. Calculate average marks of student which is used to determine the corresponding grades.

Range	Grade
35 to 60	F
61 to 70	D
71 to 80	C
81 to 90	B
91 to 100	A

```
<html>
<body>
<h1>Student Grade Calculator</h1>
<form name="frm1">
Enter Marks of English
<input type="number"name="t1"><br><br>
Enter Marks of Maths
<input type="number"name="t2"><br><br>
Enter Marks of Physics
<input type="number"name="t3"><br><br>
Enter Marks of Chemistry
<input type="number"name="t4"><br><br>
Enter Marks of IT
<input type="number"name="t5"><br><br>
<input type="button" name="btnclick" value="Print Grade" onClick=
"grade()">
</form>
</body>
<script >
function grade()
{
```

```
var m1,m2,m3,m4,m5,a;
m1=frm1.t1.value;
m2=frm1.t2.value;
m3=frm1.t3.value;
m4=frm1.t4.value;
m5=frm1.t5.value;
a=(m1+m2+m3+m4+m5)/5;
alert("Average Marks of Student is"+a);
if(a>90)
     alert("Grade A");
else if(a>80 && a<=90)
     alert("Grade B");
else if(a>70 && a<=80)
     alert("Grade C");
else if(a>60 && a<=70)
     alert("Grade D");
else if(a>35 && a<=60)
     alert("Grade F");
else
     alert("Not Promoted");
</script>
</html>
```

SOP 7 : Write a JavaScript function to get difference between two dates in days. Create a page in HTML that contains input box to accept date from user. The input boxes should be used by users to enter their date of birth in the format dd-mm-yyyy. Do not make use of any dropdown boxes.

Example :

date_diff_indays('04/02/2019', '11/04/2019');
date_diff_indays('01/01/2020', '31/01/2019');

Output :

66

-30

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Date Difference Calculator</title>
    <script>
        function getDays(i_Date1, i_Date2) {
            // Parse the first date
            var str = i_Date1;
```

```
            var day = str.slice(0, 2);
            var month = str.slice(3, 5);
            var year = str.slice(6, 10);
            var dt1 = new Date(year, month - 1, day);
                    // Month is 0-indexed

                    // Parse the second date
            var str2 = i_Date2;
            var day1 = str2.slice(0, 2);
            var month1 = str2.slice(3, 5);
            var year1 = str2.slice(6, 10);
            var dt2 = new Date(year1, month1 - 1, day1);
                    // Month is 0-indexed

               // Calculate the difference in milliseconds
            var one_day = 1000 * 60 * 60 * 24;
            var date1_ms = dt1.getTime();
            var date2_ms = dt2.getTime();
            var difference_ms = date2_ms - date1_ms;
               // Corrected subtraction

               // Output the difference in days
            document.write(Math.round(difference_ms / one_day));
        }
    </script>
</head>
<body>
    <form name="form_task">
        Date1: <input type="text" name="d1" placeholder="dd/mm/yyyy">
        <br><br>
        Date2: <input type="text" name="d2" placeholder="dd/mm/yyyy">
        <br><br>
        <input type="button" value="Submit"
onclick="getDays(form_task.d1.value, form_task.d2.value)">
    </form>
</body>
</html>
```