

- **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.

The screenshot shows a web form titled "Information Form". It contains four input fields: "Your Name:-" (text), "Address:-" (text area with a placeholder "PERMANENT ADDRESS"), "Contact:-" (text), and "E-mail:-" (text). Below these fields is a "Submit" button.

Coding :

```
email.html
<html>
<body>
<form name="frm1">
Enter Name
<input type="text" name="t1"><br><br>
Enter Address<br>
<textarea name="t2" placeholder="PERMANENT
ADDRESS"></textarea><br><br>
Enter Telephone 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="lax2107@gmail.com"><br><br>
<input type="button" name="b1" value="Submit" onClick="chk()">
</form>
</body>
```

```
<script type="text/javascript">
function chk()
{
var x=frm1.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");
frm1.t3.focus();
}
else
{
alert("Email address is accepted");
return true;
}
}
</script>
</html>
```

Output :

- **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.

Coding :

```
<!DOCTYPE html>
<html>
<head>
<title>
String functions
</title>
</head>
<body>
<form name="frm1">
Enter Your Name
<input type="text" name="t1"><br><br>
<input type="button" name="btncheck" value="Count Vowels" onClick="cnt()">
</form>
</body>
<script type="text/javascript">
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>
</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.

Coding :

```
palindrome.html
<!DOCTYPE html>
<html>
<head>
<title>
Palindrome
</title>
</head>
<body>
<form name="frm1">
Enter Your Name
<input type="text" name="t1"><br><br>
<input type="button" name="btncheck" value="Check Palindrome"
onClick="chk()">
</form>
</body>
<script type="text/javascript">
function chk()
{
var a,s,i,ch,n;
```

```
a=frm1.t1.value;  
s=a.toLowerCase();  
n=s.length;  
var p=1;  
for(i=0; i<n/2;i++)  
{  
if(s.charAt(i)!= s.charAt(n-1-i))  
{  
p=0;  
break;  
}  
}  
if(p==1)  
alert("String is Palindrome");  
else  
alert("String is not a Palindrome");  
}  
</script>  
</html>
```

Output :



- **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

Coding :

```
grade.html
<html>
<body>
<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 type="text/javascript">
```

```
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>=91)
```

```
alert("Grade A");
```

```
else
```

```
{
```

```
if(a>=81)
```

```
alert("Grade B");
```

```
else
```

```
{
```

```
if(a>=71)
```

```
alert("Grade C");
```

```
else
```

```
{
```

```
if(a>=61)
```

```
    alert("Grade D");  
    else  
    alert("Grade F");  
    }  
    }  
    }  
    }  
    </script>  
    <html>
```