UNIT 5 : JAVASCRIPT FUNCTIONS

5.1 JavaScript Functions:

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- 5.1.4 Page redirection

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5.1 JavaScript Functions:

5.1.1 Defining function (with and without parameters)

5.1.2 calling function

5.1.3 return statement

5.1.4 Page redirection

User Defined Functions

- A JavaScript function is a block of code designed to perform a particular task.
- A JavaScript function is executed when "something" invokes it (calls it).

- A JavaScript function is defined with the function keyword, followed by a name, followed by parentheses ().
- Function names can contain letters, digits, underscores, and dollar signs (same rules as variables).

```
function name(parameter1, parameter2, parameter3)
{
  // code to be executed
}
```

5.1.1 Defining function (with and without parameters)

1. Without argument without return value
2. With argument without return value
3. Without argument with return value
4. With argument with return value

1. Without argument without return value

```
<HTML>
        <HEAD>
                <SCRIPT LANGUAGE="JAVASCRIPT">
                        function add()
                        {
                                var a=10,b=20;
                                var c=a+b;
                                alert(c);
                        }
                        add();
                </SCRIPT>
        </HEAD>
        <BODY>

        </BODY>
</HTML>
```

OUTPUT:

30

2. With argument without return value

```
<HTML>
        <HEAD>
                <SCRIPT LANGUAGE="JAVASCRIPT">
                        function add(a, b)
                        {
                                var c=a+b;
                                alert(c);
                        }
                        add(10,20);
                </SCRIPT>
        </HEAD>
        <BODY>

        </BODY>
</HTML>
```

OUTPUT:

30

3. Without argument with return value

```
<HTML>
        <HEAD>
                <SCRIPT LANGUAGE="JAVASCRIPT">
                        function add()
                        {
                                var a=10,b=20;
                                var c=a+b;
                                return c;
                        }
                        alert(add());
                </SCRIPT>
        </HEAD>
        <BODY>

        </BODY>
</HTML>
```

OUTPUT:

30

4. With argument with return value

```
<HTML>
        <HEAD>
                <SCRIPT LANGUAGE="JAVASCRIPT">
                        function add(a,b)
                        {
                                var c=a+b;
                                return c;
                        }
                        alert(add(10,20));
                </SCRIPT>
        </HEAD>
        <BODY>

        </BODY>
</HTML>
```

OUTPUT:

30

5.1.2 calling function

5.1.3 return statement

- The return statement stops the execution of a function and returns a value from that function.
- Syntax:
  - return *value*;

Example:

5.1.4 Page redirection

- There are a couple of ways to redirect to another webpage with JavaScript. The most popular ones are **location.href and location.replace**

- Note: The difference between href and replace, is that replace() removes the URL of the current document from the document history, meaning that it is not possible to use the "back" button to navigate back to the original document.

Example:

```
<html>
<head>
<script>
        function redirect()
        {
                location.href="img.htm";
        }

</script>
</head>
<body>
        <button onclick="redirect();">Click Here
        </button>

</body>
</html>
```

5.2 Dialog boxes : Alert, confirm, prompt

Dialogue Boxes

- In JavaScript you can create dialog boxes or popups to interact with the user.
- You can either use them to notify a user or to receive some kind of user input before proceeding.
  - Alert Dialogue Box
  - Confirmation Dialogue Box
  - Prompt Dialogue Box

1. Alert Dialogue Box

- An alert dialog box is mostly used to give a warning message to the users. For example, if one input field requires to enter some text but the user does not provide any input, then as a part of validation, you can use an alert box to give a warning message.
- Nonetheless, an alert box can still be used for friendlier messages. Alert box gives only one button "OK" to select and proceed.

Syntax

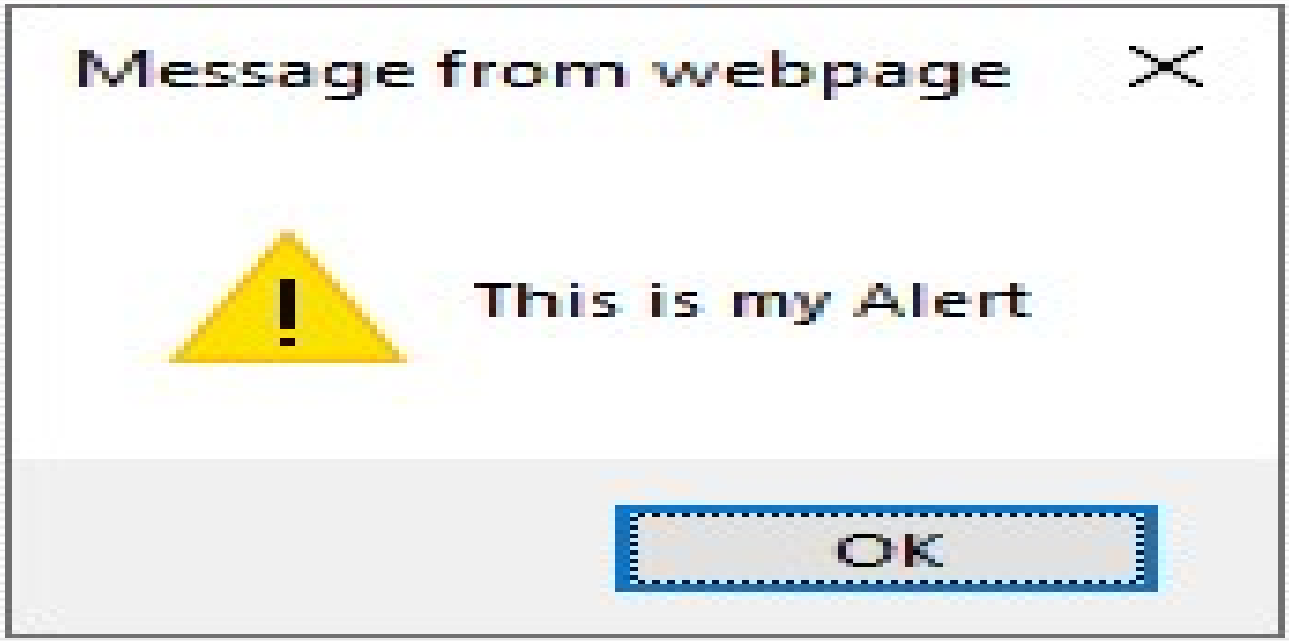
- alert([Alert Message]);

Example

```
<HTML>
        <HEAD>
                <SCRIPT LANGUAGE="JAVASCRIPT">
                        alert("This is my Alert");
                </SCRIPT>
        </HEAD>
        <BODY>

        </BODY>
</HTML>
```

Output



2. Confirmation Dialogue Box

- A confirmation dialog box is mostly used to take user's consent on any option. It displays a dialog box with two buttons: **OK** and **Cancel**.
- If the user clicks on the OK button, the window method **confirm()** will return true. If the user clicks on the Cancel button, then **confirm()** returns false.

Syntax

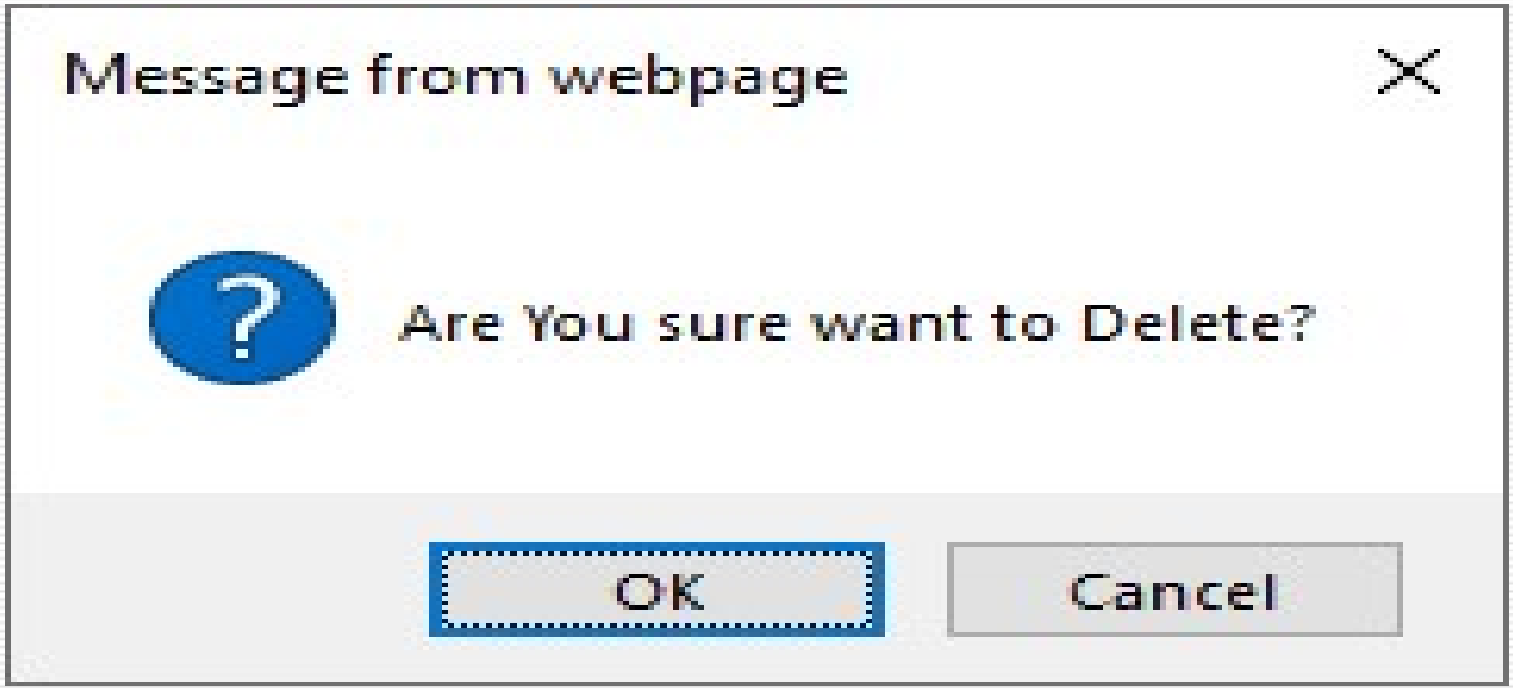
- confirm([Message]);

Example

```
<HTML>
        <HEAD>
                <SCRIPT LANGUAGE="JAVASCRIPT">
                        confirm("Are You sure want to Delete?");
                </SCRIPT>
        </HEAD>
        <BODY>

        </BODY>
</HTML>
```

Output



3. Prompt Dialogue Box

- The prompt dialog box is used to prompt the user to enter information. A prompt dialog box includes a text input field, an OK and a Cancel button.
- The prompt dialog box is very useful when you want to pop-up a text box to get user input. Thus, it enables you to interact with the user. The user needs to fill in the field and then click OK.

Syntax

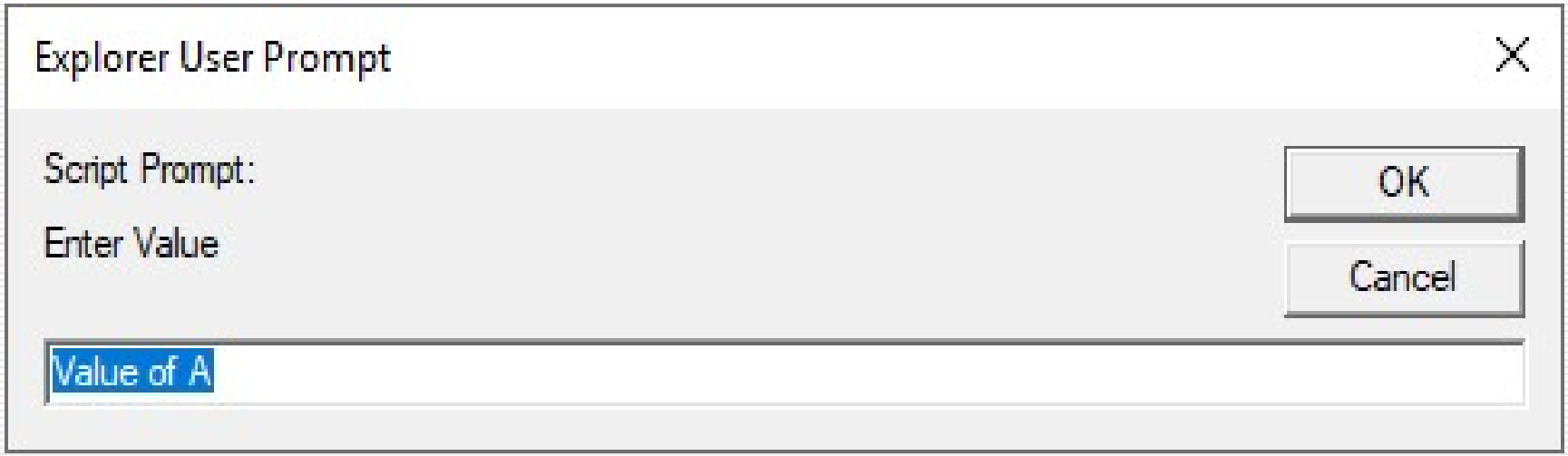
- prompt([Message],Input Message);

Example

```
<HTML>
        <HEAD>
                <SCRIPT LANGUAGE="JAVASCRIPT">
                        var A=prompt("Enter Value","Value of A");
                        alert(A);
                </SCRIPT>
        </HEAD>
        <BODY>

        </BODY>
</HTML>
```

Output


Explorer User Prompt
Script Prompt:
Enter Value
OK
Cancel
Value of A

5.3 Form validation :

5.3.1 Basic validation

(All form details are filled)

5.3.2 Data format validation

(email, number, string, mobile number, name)

5.3.1 Basic Validations

- First of all, the form must be checked to make sure all the mandatory fields are filled in. It would require just a loop through each field in the form and check for data.

Example:

```
<!-- WRITE A JAVASCRIPT CODE TO VALIDATE BLANK FIELD -->
<html>
<head>
<script>
		function validate()
		{
			var s=document.getElementById("txt").value;
			if(s=="")
				document.getElementById("div1").innerHTML="<font
color='red'>Please Fill this Field</font>";
				return false;
		}
</script>
</head>
<body>
<form onsubmit="return validate();">
Enter Any Value :
<input type="text" id="txt" > <div id="div1"></div>
<input type="submit">
</form>
</body>
</html>
```

5.3.2 Data format validation (email, number, string, mobile number, name)

- Secondly, the data that is entered must be checked for correct form and value. Your code must include appropriate logic to test correctness of data.

Example: name

```
<!-- WRITE A JAVASCRIPT CODE TO VALIDATE NAME -->
<html>
 <head>
  <script>
   function valid()
   {
    var s=document.getElementById("txtfname").value;
                var p=/^[A-Za-z]+$/;
                if (s.match(p))
                        alert("valid");
                else
                {
                        alert ("Enter Proper First Name");
                        return false;
                }
   }
  </script>
 </head>

 <body>
   <form onsubmit="return valid();">
   First Name:<input type="text" id="txtfname" required>
    <input type="submit">
  </form>
  </body>
</html>
```

Example: number

```
<!--
WRITE A JAVASCRIPT CODE TO VALIDATE NUMBER
-->
<html>
 <head>
  <script>
   function valid()
   {
    var s=document.getElementById("txtnum").value;
                        var p=/^[0-9]+$/;
                        if (s.match(p))
                                        alert("valid");
                        else
                        {
                                        alert ("Enter Proper Number");
                                        return false;
                        }
   }
  </script>
 </head>

 <body>
   <form onsubmit="return valid();">
   Enter Numbers:<input type="text" id="txtnum" required>
    <input type="submit">
  </form>
  </body>
</html>
```

Example: mobile number

```
<!--
WRITE A JAVASCRIPT CODE TO VALIDATE MOBILE NUMBER
-->
<html>
 <head>
  <script>
   function valid()
   {
    var s=document.getElementById("txtmnum").value;
                var p=/^[0-9]+$/;
                if(s.length!=10)
                        alert("Mobile Numbers must contain 10 Digits");
                else if (!s.match(p))
                        alert("Numbers Only");
                else
                        alert("valid");
   }
  </script>
 </head>

 <body>
   <form onsubmit="return valid();">
   Enter Mobile Numbers:<input type="text" id="txtmnum" required>
   <input type="submit">
  </form>
  </body>
</html>
```

Example: email

```
<!-- WRITE A JAVASCRIPT CODE TO VALIDATE EMAIL -->
<html>
        <head>
                <script>
                        function valid()
                        {
                                var s=document.
                                getElementsByName("txtemail")[0].value;
                                var a= /[a-z0-9._%+-]+@[a-z0-9.-]+\.[a-z]{2,3}$/;
                                if (!s.match(a))
                                        alert("Invalid");
                                else
                                        alert("Valid");
                        }
                </script>
        </head>
        <form onsubmit="valid();">
        Enter Email:<input type="text" name="txtemail" required>
                <input type="submit">
        </form>
</html>
```