

6.1 Status Bar

Q. What is status bar? Explain with example.

Status bar is a horizontal bar, typically at the bottom of the screen or window, displaying information about a document being edited or a program running. We can modify status bar using JavaScript. For example, it can be used to display information about a link, when the user moves cursor of mouse over that link. Also a small amount of information about the page can be displayed in the status bar. The horizontal status bar is removed in modern web browsers. The status information is still shown in a small box which is generated dynamically and disappears. Hence, the static message is not work with that new status bar, because, it does not stay on screen.

6.1.1 Build Static Message

Q. How to build a static message in status bar? Explain with example.

We can build a static message which will display on status bar. As it is static it will be present permanently on status bar. To create a message in status bar we used 'status' property of window object. This property is not supported by the modern browser. Thus, the static message is not possible to display in modern browser. So, it has no effect. We can create static message in old browser and old operating system as follows.

Program 1: To display static message on status bar (Supports old browsers only)

```
<!DOCTYPE html>

<html>

<head>

    <title> Status bar Example </title>

<script language="javascript" type="text/javascript">

    window.status="Welcome to status bar. This is static message.";

</script>

</head>

<body>

<h3><p> Building static message in status bar</p> </h3>

</body>

</html>
```

Output :



Program 2: Changing the message using rollover (Supports old browsers only)

```
<!DOCTYPE html>

<html>

<head>

    <title> Status bar Example </title>

</head>

<body>

<h4>Image Rollover</h4>

<a onmouseover="window.status='Welcome to status bar. This is an Apple'">

<h3>Apple</h3>

</a>

<a onmouseover="window.status='Welcome to status bar. This is a Pineapple'">

<h3>Pineapple</h3>

</a>

</body>

</html>
```

Output :



Program 3: Moving the message along the status bar (Supports old browsers only)

```
<!DOCTYPE html>

<html>

<head>

    <title> Status bar Example </title>

<script language="javascript" type="text/javascript">

var scrollPos=0;

var maxScroll=100;

var blanks="";

function scrollText(text, milliseconds)

{

    window.setInterval("displayText('"+text+"')",milliseconds);

}


function displayText(text)

{

window.defaultStatus=blanks+text;

++scrollPos;

blanks+=" ";

if(scrollPos>maxScroll)

{

    scrollPos=0;

    blanks="";

}

}
```

```
}
```

```
</script>
```

```
</head>
```

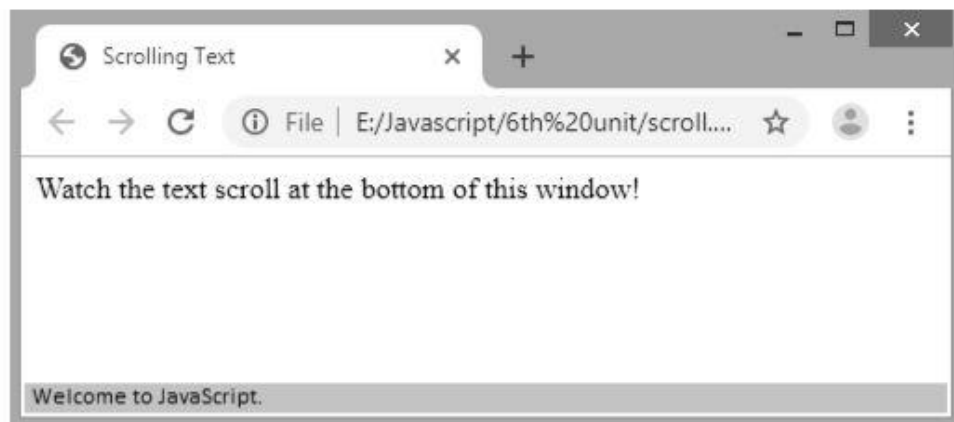
```
<body onload="scrollText('Welcome to JavaScript',300)">
```

```
<p>Watch the text scroll at the bottom of this window!</p>
```

```
</body>
```

```
</html>
```

Output :



6.2 Banner

Q. What is Banner ? Explain with example.

A rectangular area in webpage where image is placed for advertisement purpose is known as Banner. Banner can be placed anywhere in the webpage, horizontally on top and bottom or vertically at right and left side of the webpage.

Program 1: simple banner

```
<!DOCTYPE html>

<html>

<head>

<title>Banner Example</title>

</head>

<body>



</body>

</html>
```

Program 2: simple banner with multiple images

```
<!DOCTYPE html>

<html>

<head>

  <title>Banner Example</title>

  <script language="javascript" type="text/javascript">

    banner_array=new Array('google.jpg', 'google_banner.jpg',

    'google_img.jpg');

    banner=0;


    function DisplayBanners()

    {

    if(document.images)

    {

    banner++;

    if(banner==banner_array.length)

    {

    banner=0;

    }

    document.ChangeBanner.src=banner_array[banner];

    setTimeout("DisplayBanners()", 5000);

    }

    }

  </script>
```



```
<body onload="DisplayBanners()">

<center>

</center>

</body>

</html>
```

Program 3: Linking a Banner to URL

```
<!DOCTYPE html>

<html>

<head>

  <title>Banner Example</title>

</head>

<body>

  <a href="https://www.google.co.in ">

  </a>

</body>

</html>
```

Program 4: Linking all images of a Banner to URLs

```
<!DOCTYPE html>

<html>

<head>

<title>Banner Example</title>


<script language="javascript" type="text/javascript">

banner_array=new Array('google.jpg', 'google_banner.jpg',

'google_img.jpg');

link_array=new Array('https://www.google.com',

'https://www.gmail.com', 'https://www.gpawasari.ac.in');

banner=0;

function DisplayBanners()

{

if(document.images)

{

banner++;

if(banner==banner_array.length)

{

banner=0;
```

```
}  
  
document.ChangeBanner.src=banner_array[banner];  
  
setTimeout("DisplayBanners()", 5000);  
  
}  
  
}
```

```
function display_page()  
{  
document.location.href=link_array[banner];  
}
```

```
</script>
```

```
<body onload="DisplayBanners()">  
  
  <center>  
  
    <a href="Javascript:display_page()">  
  
        
  
    </a>  
  
  </center>  
  
</body>  
  
</html>
```

6.3 Slide Show

Q. What is slide show? Explain with example.

A series of images as a presentation continuously changing one after another on screen is known as slide show. It contains multiple still images, which change in a sequential order after few seconds. We can create a slide show by using array of image in JavaScript.

Program 1:

```
<!DOCTYPE html>

<html>

<head>

    <title>Image SlideShow</title>

<script language="javascript" type="text/javascript">

    var images = ["1.jpg", "2.jpg", "3.jpg", "4.jpg", "5.jpg"];

    var count = 0;

    function previousImage()

    {

        if(count!=0)

            count--;

        var id = document.getElementById("imageId");

        id.src = "images/" + images[count];

    }

    function nextImage() {

        if(count!=4)

            count++;

    }

}
```

```
        var id = document.getElementById("imageId");

        id.src = "images/" + images[count];

    }
</script>

</head>

<body>

<center>

    </br></br>

    <input type="button" value="< Prev Image" onclick="previousImage()"/>

    <input type="button" value="Next Image >"

        onclick="nextImage()"/>

</center>

</body>

</html>
```

6.4 Menus

Q. What is menu? Explain with example.

The *menu* element represents a group of commands that a user can perform or activate. Menu may contain multiple choices to select. User can choose one or more menu at a time depending on type of menu.

6.4.1 Creating Pull Down Menu

Q. What is pull down menu? Explain with example.

Q. How to create a pulldown menu? Explain with example.

A website is a collection of multiple webpages. So, there should be a proper navigation to visit these pages. The menu is used to navigate through the website. Menu contains the various items which perform related operations such as opening a new webpage, displaying other related information, etc. There are various types of menus are available, such as pulldown menu, floating menu, chain select menu, tab menu, sliding menu, pop up menu, scrollable menu, etc. The pulldown menu can be created by using `<select>` tag of HTML. The `<option>` tag is used to define the options of the pulldown menu. The `<option>` tag written inside `<select>` tag.

Program 1: Pull Down Menu

```
<!DOCTYPE html>

<html>

<head>

<title>Pulldown Menu Example</title>

<script language="javascript" type="text/javascript">

function GetSelectedItem()

{

var i=document.getElementById("select");

var str = i.options[i.selectedIndex].value;

alert("The selected value is:"+str);

}

</script>

</head>
```

```
<body>

<form>

Select you favourite Subject: <br><br>

<select id="select">

<option value="C">C</option>

<option value="C++">C++</option>

<option value="Java">Java</option>

<option value="JavaScript">JavaScript</option>

</select>

<input type="button" value="Get Selected Item" onclick="GetSelectedItem()"/>

</form>

</body>

</html>
```


6.4.2 Dynamically Changing the Menu

Q. What is dynamically changing the menu? Explain with example.

Q. How to create dynamically changing menu? Explain with example.

The item of the menu can be changed dynamically depending on any action taken place. There is two pulldown menu. One contains the class name and other contains the subject. So, on the selection of first menu the other menu item is changed dynamically.

Program 2:

```
<!DOCTYPE html>

<html>

<head>

<title>Dynamically Changing Menu Example</title>

<script language="javascript" type="text/javascript">

sy_subjects=new Array("OOP","CG","DBMS","DSU","DTE");

ty_subjects=new Array("AJP","STE","EST","OSY","CSS");

function GetSelectedItem(sub)

{

var select=document.getElementById("student");

var s = select.options.length;

for(i=s; i>=0; i--)

{

select.options.remove(i);

}

var x=document.getElementById("mySelect").value;
```

```
if(x=="syif")
{
    for(i=0; i<sy_subjects.length; i++)
    {
        opt=document.createElement("option");
        opt.value=sy_subjects[i];
        opt.textContent=sy_subjects[i];
        select.appendChild(opt);
    }
} else if(x=="tyif")
{
    for(i=0; i<ty_subjects.length; i++)
    {
        opt=document.createElement("option");
        opt.value=ty_subjects[i];
        opt.textContent=ty_subjects[i];
        select.appendChild(opt);
    }
} else if(x=="class")
{
    opt=document.createElement("option");
    opt.value="class";
    opt.textContent="Subjects";
    select.appendChild(opt);
}
```

```
}  
  
}  
  
</script>  
  
</head>  
  
<body>  
  
    <select id="mySelect" onchange="GetSelectedItem(this)">  
        <option value="class">Class</option>  
        <option value="syif">SYIF</option>  
        <option value="tyif">TYIF</option>  
    </select>  
  
    <select id="student" name="student">  
        <option value="0">Subjects</option>  
  
    </select>  
  
</body>  
  
</html>
```

6.4.3 Validating Menu Selection

- Q. What is validating menu selection? Explain with example.

Q. How to validate the menu selection? Explain with example.

While filling information, user can forget to select an option in menu. In such case, the incomplete information should not be send to the server. To make fields compulsory to fill, we use filed validation. We can validate menu selection by using JavaScript. JavaScript is used for Client Side Validations. We can check whether the input is correct or not. If input is incorrect then the error message can be generated and displayed to the screen. By using JavaScript, the user gets prompt to fill the proper information.

Program 3:

```
<!DOCTYPE html>

<html>

<head>

<title>Validation Menu Example</title>

<script language="javascript" type="text/javascript">

function GetSelectedItem()

{

var select=document.getElementById("student");

var x=document.getElementById("mySelect").value;

if(x=="Select Subject")

{

    alert("Please select subject");

}

else

{
```

```
document.getElementById("demo").innerHTML="You Selected:"+x;

}

}

</script>

</head>

<body>

<select id="mySelect">

<option value="Select Subject">Select Subject</option>

<option value="OOP">OOP</option>

<option value="CG">CG</option>

<option value="DBMS">DBMS</option>

<option value="DSU">DSU</option>

<option value="DTE">DTE</option>

</select> <br>

<input type="button" value="Submit" onclick="GetSelectedItem()"> <br>

<p id="demo"></p>

</body>

</html>
```

6.4.4 Floating Menu

Q. What is floating menu ? Explain with example.

Q. How to create a floating menu ? Explain with example.

When user scrolls the webpage, sometimes we need a menu to stick to the screen for particular operation. The menu which is fixed while scrolling the webpage is known as floating menu. A floating menu can be created by setting the style position of that menu fixed. Following example shows the floating menu on webpage.

Program 4:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Floating Menu Example</title>
```

```
<script language="javascript" type="text/javascript">
```

```
function GetSelectedItem()
```

```
{
```

```
var select=document.getElementById("student");
```

```
var x=document.getElementById("mySelect").value;
```

```
if(x=="Select Subject")
```

```
{
```

```
    alert("Please select subject");
```

```
}
```


6.4.5 Chain Select Menu

Q. What is chain select menu?

Q. How to create a Chain select menu?

Chain select menu is a type of dynamic menu in which there are more than one select menu present. The option select from first menu decides the options of second menu and option selected from second menu decides the option of the third menu. For ex. There are three select menu are available first for district second for tehsil of selected district and third for village of selected tehsil. First we need to select district from first select menu, then on the basic of selected district in first menu the options of second menu decided i.e. tehsil of selected district will be set as options to second menu. Then we need to select the tehsil from second menu. Then the villages of selected tehsil will be set to the third menu as options. Then we can select the village.

| | | |
|--------|------------|------------|
| Pune ▼ | Purandar ▼ | Saswad ▼ |
| | Bhor | Kodit |
| | Haveli | Chambali |
| | Purandar | Narayanpur |
| | Shirur | Saswad |

6.4.6 Tab Menu

Q. What is Tab menu?

Tab menu contain the one of more tab-head like a button. Each tab contains separate content to display. If we click on a tab-head then the content related to that tab will be displayed. If we want more than one page like content which will replace the previous content on tab-head click then the tab menu is the best option.

| | | |
|---------------------------|----------|---------|
| Home | About us | Contact |
| Content of Home Page..... | | |

Fig. 6.4.2

6.4.7 Popup Menu

Q. What is Popup menu?

Popup menu is nothing but an hoverable dropdown menu. The drop down menu display the sub menu on mouse over is known as popup menu. It contains the submenu which will display or popup below the menu in the form of list. As shown in the Fig. 6.4.3 if we take mouse on the menu, it will popup the list of submenu.

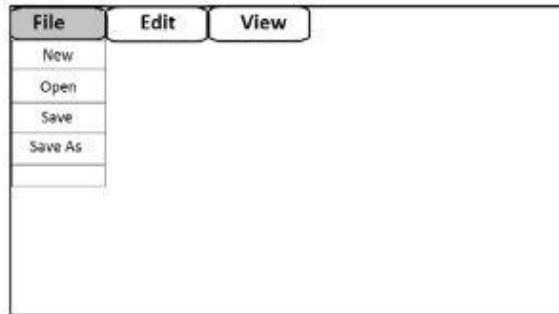


Fig. 6.4.3

As shown in Fig. 6.4.3, if we take mouse cursor to the menu then it will popup the list of submenu. In popup menu we do not require to click on the menu, it can popup the list of sub menu by only taking the mouse cursor to it.

6.4.8 Sliding Menu

Q. What is sliding menu?

The sliding menu is not present on screen. We need to click on button or some menu icon to display the menu. If we click on menu icon then the menu will slide in the screen to display on screen. Following example will illustrate the working sliding menu.

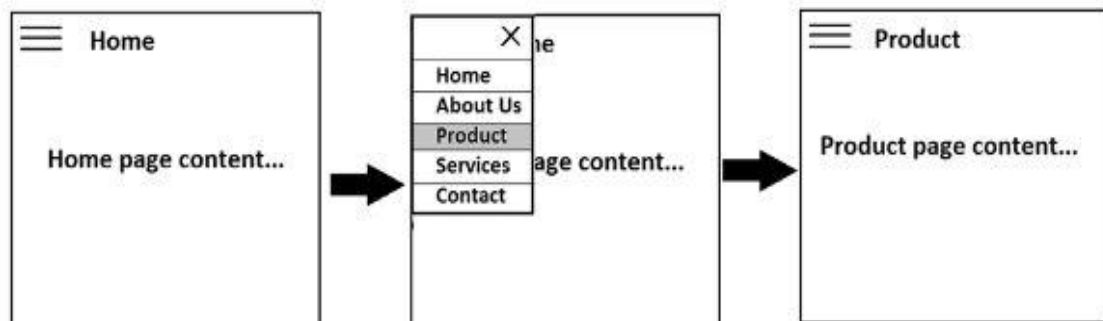


Fig. 6.4.4

As shown in Fig. 6.4.4, the sliding menu icon is displayed on left side of the first screen. If we click on this icon the menu will slide from left to right and display as shown in second screen. It may contain more than one sub menu. If we click on any sub menu then the content related to that sub menu will be displayed. As we click on product the product content will be displayed and the menu will hide by sliding from right to left.

6.4.9 Highlighted Menu

Q. What is highlighted menu?

The highlighted menu can be created by mouse over effect. As user moves the mouse to any menu item, the menu will be highlighted by using special effects such as background color change or making the font style as bold, etc. The highlighted menu is used to make a confirmation that the user is going to choose a proper menu item.

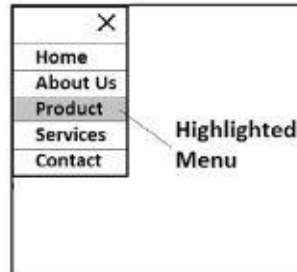


Fig. 6.4.5

As shown in the Fig. 6.4.5, the user moves the cursor to the menu 'Product' the background color of that menu item will be changed. It makes confirmation that the user going to click the right menu.

6.4.10 Folding a Tree Menu

Q. What is folding tree menu?

A menu which contain sub menu and the sub menu contain the sub menu then the hierarchy like tree of menu is created. The menu can be fold by hiding the sub menus and unfold by displaying the submenu of a menu is known as foldable tree menu.

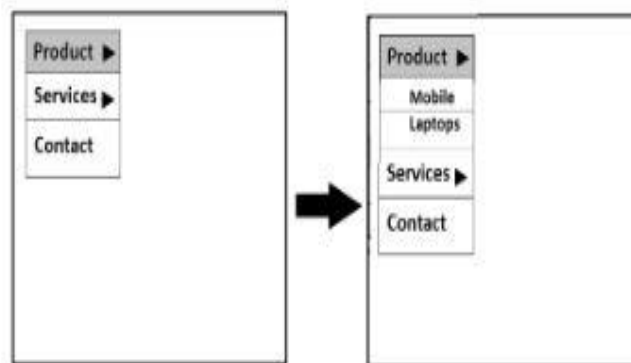


Fig. 6.4.6

As shown in the Fig. 6.4.6, the menu can be expanded. If we click on a foldable tree menu it will display the sub menu list below the menu clicked. If we click again then the sub menu will be hidden i.e. folded.

6.4.11 Context Menu

Q. What is context menu?

On a webpage if we click a right button of mouse then the context menu will be displayed. The will be displayed on right click of mouse and the position of menu is depend on the location where the mouse is clicked.

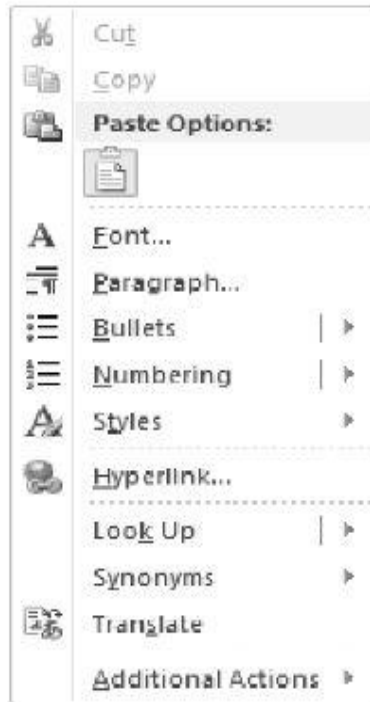


Fig. 6.4.7

6.4.12 Scrollable Menu

Q. What is scrollable menu?

The menu in which items can be scrolled to display limited item on screen is called as scrollable menu. If there are many menu need to be displayed on screen, but all menus are not fit on the screen then we can use the scrollable menu.



Fig. 6.4.8

The above Fig. 6.4.8, the scrollable menu. There are two arrows which scrolls the menu. If we click on left arrow then one menu of left side will be hide and the and one new menu is added to right side. It just scrolls the menu item from one side to another.

6.4.13 Side Bar Menu

Q. What is side Bar Menu?

In side bar menu, the sub menu of a menu item will be displayed on right side of the menu. When we click on the menu item, the sub menu item of that menu will be displayed on right side of the menu.

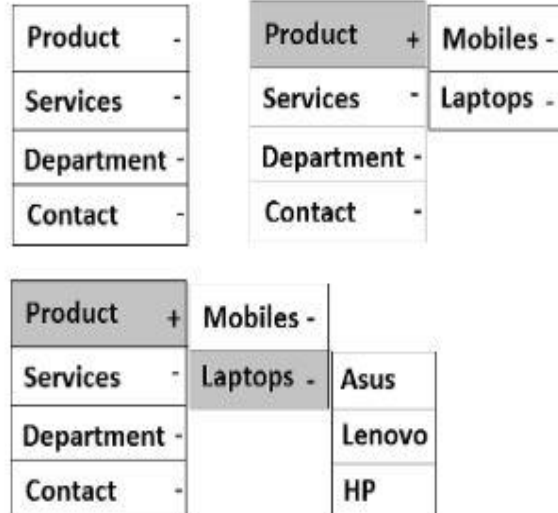


Fig. 6.4.9

In Fig. 6.4.9, the side bar menu is shown. If we click a menu item 'Product' then the side menu items will be displayed. again if we click on the side sub menu item 'Laptops', then the sub menu item of 'Laptops' will be displayed.

6.5 Protecting the Webpage

6.5.1 Hiding Your Code

The source code of the webpage can be viewed by clicking right mouse button on the webpage. Anyone who visits to the webpage can simply view the source code of the webpage. Viewing source code by users is not safe. We can hide the source code of the webpage by disabling the right mouse click on webpage. We write the code to disable the right mouse button in JavaScript. Hiding source code is protecting the source code by viewing other users.

6.5.2 Disabling the Right Mouse Button

The source code of the webpage of some websites can be viewed by right clicking and selecting the option 'view source'. By viewing source code we can find out how the webpage is created, anyone can use that source code to create their own webpage. It is not secure to display a source code to users. We can disable the right click of mouse button. Thus the user cannot see the source code of the webpage.

Program 5:

```
<!DOCTYPE html>

<html>

<head>

<title>disabling right click Example</title>

<script language="javascript" type="text/javascript">

document.addEventListener('contextmenu',event=>event.preventDefault());

</script>

</head>


<body>

<h3><p>Disabling the right click of mouse button</p></h3>

</body>

</html>
```

6.5.3 Concealing email Address

Q. What is mean by concealing email address? Explain with example.

Concealing email address means to hide email address from unauthorized user. If we are working with the email address and we don't want to show email address to the user, then we can hide the email address by using JavaScript.

6.6 Frameworks of JavaScript and its Application

Q. What are the JavaScript frameworks?

Q. What are the applications of the JavaScript Framework?

A JavaScript framework is an application framework which is written in JavaScript. JavaScript frameworks are collections of JavaScript libraries which provide the predefined code or functions to the developer. It performs the general programming that JavaScript do and many more with less lines of code. There are various JavaScript frameworks are available. Each framework has different work flow. An entire application is based on the framework. The framework designs the complete application. In framework, User need not call the predefined library functions instead the framework itself call the functions in specific way. Some of the framework such as AngularJS follows the Model-View-Controller design pattern to separate the complex code and to make easy the development and improve the code quality. Some of the examples of JavaScript frameworks are AngularJS, ReactJS, MeteorJS, EmberJS, etc.

Each Framework has wide range of applications. JavaScript frameworks are used in web development as well as in hybrid mobile app development. It improves the code quality. The development of entire application is based on the framework, where less code is required to write by developer. The react.js is used in react-native mobile application development. Angular JS is used in single page web application development. Frameworks reduce the code complexity.