JavaScript Exercises 2

Exercise 1 : Displaying the Properties of the Navigation Object

Type in the following code. Note that we are embedding the Javascript code in the html page, instead of storing it in a separate script file.

It adds the properties to a string variable called Info, and then displays it in an alert box.

NavFunc.htm

```
<html>
<head>
<script>
  function displayinfo()
  {
    var info = "BROWSER INFORMATION \n";

    for (var propname in navigator)
      {
        info = info + propname + ":  " + navigator[propname] + "\n";
      }
    alert(info);
  }
</script>

<body>
  <button onclick="displayinfo()">Show Info</button>
</body>
</html>
```

Exercise 2 : Displaying the Properties of the Screen Object

This will make use of the document.write method to display information directly on the web page.

Screenfunc.htm

```
<html>
<head>
<script>
  function displayinfo()
  {
    document.write("Height: " + screen.height + "  ");
    document.write("Width: " + screen.width + "  ");
    document.write("Colour Depth: " + screen.colorDepth + "  ");
    document.write("Available Height: " + screen.availHeight + "  ");
    document.write("Available Width: " + screen.availWidth + "  ");
  }
</script>

<body>
  <button onclick="displayinfo()">Show Info</button>
</body>
</html>
```

Exercise 3 : Pop up Windows

For the following exercises, if you are using IE7, you need to switch off tabbed browsing. Go to Tools > Internet Options > Tabs > Settings and set 'Always open pop-ups in new window'.

The list of arguments that window.open expects to see in brackets can be found on the W3Schools website at: **http://www.w3schools.com/htmldom/dom_obj_window.asp**

Type in the following script and save it as:

WOM02script.js

```
var win = null;

function appear()
{
 this.resizeTo(800,200);
 win = window.open('','','width=200,height=200,left=400,top=400');
}

function disappear()
{
  win.close();
}
```

Now we need a webpage which will call these functions when we click on a button.

Note the use of the <script> tag, which tells the browser where the scripts are stored.

WOM02.htm

```
<html>
  <head>
    <script src="WOM02script.js" type="text/javascript">
    </script>
  </head>
<body>
  <button onclick="appear()">Appear</button>
  <button onclick="disappear()">Disappear</button>
</body>
</html>
```

You may find that you have to switch off the pop up blocker, which most browsers are now equipped with before it will work.

Exercise 2: Moving the window

Now we will add some more functions to our script file, which enable us to move the small window. We will use the function **moveBy(x,y)** to do this.

Make the following changes to WOM02script.js and save it as:

WOM03script.js

```
var win = null;

function appear()
{
 this.resizeTo(800,200);
 win = window.open('','','width=200,height=200,left=400,top=400');
}

function disappear()
{
  win.close();
}

function moveleft()
{
  win.moveBy(-10,0);
}

function moveright()
{
   win.moveBy(+10,0);
}
```

We will also provide a second link.

Make the following changes to WOM02.htm and save it as:

WOM03.htm

```
<html>
  <head>
    <script src="WOM03script.js" type="text/javascript">
    </script>
  </head>
<body>
  <button onclick="appear()">Appear</button>
  <button onclick="disappear()">Disappear</button>
  <button onclick="moveright()">Move Right</button>
  <button onclick="moveleft()">Move Left</button>
</body>
</html>
```

Exercise 3: Add further Buttons

Add two more more buttons, which will enable you to move the window up or down by 10 pixels. You can still make use of the moveTo function.

Add a further two buttons, which will make the window grow or shrink by 10 pixels. You will need to use the function **resizeTo(x,y).**

Look it up on W3Schools if you are not sure how to use it.

Exercise 4: The Bouncing Window

WOMBounce.js

```
var x = 0;
var y = 0;
var w = 100;
var h = 100;
var dx = 5;
var dy = 5;
var interval = 50;
var win = null;
var timer = null;

//////////////////////////////////////////

function start()
{
  x = (screen.width - w)/2;
  y = (screen.height - h)/2;

  win = window.open('', '',"left=" + x + ",top=" + y +
                           ",width=" + w + ",height=" + h + ",status=yes");

 timer = setInterval(nextframe, interval);

}

//////////////////////////////////////////

function stop()
{
  clearInterval(timer);
  if (!win.closed)
      win.close();
}

//////////////////////////////////////////

function nextframe()
{
  if (win.closed)
  {
    clearInterval(timer);
      return;
  }
  if ((x + dx > (screen.availWidth - w)) || (x + dx < 0 ))
        dx = -dx;

  if ((y + dy > (screen.availHeight - h)) || (y + dy < 0 ))
        dy = -dy;

  x = x + dx;
  y = y + dy;

  win.moveTo(x, y);

  win.defaultStatus = "(x:" + x + ", y:" + y + ", dx:" + dx +
                                                ", dy:" + dy + ")";
  }
```

Now the webpage which will make use of those functions:

WOMBounce.htm

```
<html>
  <head>
    <script src="WOMBounce.js" type="text/javascript">
    </script>
  </head>
<body>
  <button onclick="start()">Start</button>
  <button onclick="stop()">Stop</button>
</body>
</html>
```

Once you have seen it working, slow the box down, so that you can see how the values change in the status bar of the bouncing box.