Ex. No. 5	JavaScript – DOM Elements And Events
Date of Exercise	16/08/2023

Aim:

To create a web page which demonstrates dynamic actions for user interactions using JavaScript document object model methods and events.

Description:

Document Object Model:

A Document object represents the HTML document that is displayed in that window. The document object has various properties that refer to other objects which allow access to andmodification of document content. The way a document content is accessed and modified iscalled the Document Object Model, or DOM.

Finding HTML Element by Id
var myElement = document.getElementById("intro");

Finding HTML Elements by Tag Name
var x = document.getElementsByTagName("p");

Finding HTML Elements by Class Name
var x = document.getElementsByClassName("intro");

Finding HTML Elements by CSS Selectors

var x =
document.querySelectorAll("p.intro")

Attach event handler to the document
document.addEventListener("click",
function()

{document.getElementById("demo").innerHTML = "Karunya";

});

JavaScript Events:
JavaScript's interaction with HTML is handled through events that occur when the user or the browser manipulates a page.

Event	Description
onload	Triggers when the document loads
onclick	Triggers on a mouse click
onchange	Triggers when an element changes
onkeyup	Triggers when a key is released
onkeydown	Triggers when a key is pressed
onmouseover	Triggers when a mouse pointer moves over an element
onmousedown	Triggers when a mouse button is pressed
onsubmit	Triggers when a form is submitted

Program:

1. Create a web page using HTML, CSS and JavaScript program to develop currency convertor. Keep at least 4 currencies via drop down list box (<select> Element) as given in the sample output. [Use onchange event] .

```
<!DOCTYPE html>
<html>
<head>
  <title>Currency Converter</title>
<style>
  body{
    background-image:url(v.jpg) ;
    background-repeat: no-repeat;
    background-size: cover;
  }
  .d1 {
    border: 5px solid black;
    padding: 10px;
    margin: 100px auto;
    width: 300px;
  }
  p{
    background-image: url(bg.jpg);
  }
  #res{
    background-color: #555d8b75;
  }
  .r{
    padding: 15px;
  }
  select, input {
    width: 50%;
```

```
            padding: 2px;
            border: 3px solid black;
        }
    </style>
    <script>
    function convertCurrency() {
        var amount = parseFloat(document.getElementById("amount").value);
        var from = document.getElementById("from").value;
        var to = document.getElementById("to").value;
        var rate = {
            "USD": 1,
            "INR": 83.32,
            "EUR": 0.92,
            "QTR": 3.64
        };
        if (isNaN(amount)) {
            document.getElementById("res").innerHTML = "Please enter a valid amount";
            return;
        }
        var answer = (amount * rate[to]) / rate[from];
        document.getElementById("res").innerHTML = "Amount" + " " +  " = " +
answer.toFixed(2) + " " + to;
    }
    </script>
    </head>
    <body>
        <p></p>
        <div class='d1'>
            <h1 style="color: rgba(6, 6, 6, 0.779); text-align: center;">Currency
Converter</h1>
            <form>
                <label style="color: #4b0dda;" for = "amount">Amount:</label>
                <br><br>
                <input type="text" id="amount" placeholder="Enter amount"
onchange="convertCurrency()">
                <br><br>

                <label style="color: #4b0dda;"; for="from">From:</label>
                <br><br>
                <select id="from" onchange="convertCurrency()">
                    <option value="USD">USD</option>
                    <option value="INR">INR</option>
                    <option value="EUR">EUR</option>
                    <option value="QTR">QTR</option>
                </select>
                <br><br>
                <label style=color:rgba(0, 0, 255, 0.627); for="to">To:</label>
                <br><br>
```

```
            <select id="to" onchange="convertCurrency()">
               <option value="USD">USD</option>
               <option value="INR">INR</option>
               <option value="EUR">EUR</option>
               <option value="QTR">QTR</option>
            </select><br><br>
            <div id="res" class="r" style="text-align: center;"></div>
         </form>
      </div>
   </body>
</html>
```

2. Design a webpage using HTML, CSS and **JavasScript** as per the following design and perform the Cake order calculation using **JavaScript.** [use onclick event] .

```
<!DOCTYPE html>
<html lang="en">
<head>
   <title>Cake World</title>
   <style>
      body{
         background-color: rgba(0, 0, 0, 0.478);
      }
      .order{
      position: absolute;
      width: 300px;
      padding: 12px 20px;
      margin-left: 40%;
      margin-top: 3%;
      box-sizing: border-box;
      border-width: 8px;
      border-radius: 1px;
      background-color:whitesmoke;
      opacity: 60%;
      height: 300px;
      }
      header {
         text-align: center;
         font-size: 20px;
         background-color:#ff9999ef;
         color: #fff;
         padding: 2px;
      }
      .t {
      display: flex;
      justify-content: space-between;
      margin-top:40px;
      overflow: hidden;
      }
```

```
        .t1 img {
        width:350px;
        height:370px;
        object-fit: cover;
        opacity: 1;
        }
        button {background-color: #008bba60; border: none;
        color: white;
        padding: 10px 20px;
        text-align: center;
        text-decoration: none;
        display: inline-block;
        font-size: 16px;
        border-radius: 8px;
        width: 250px;
        cursor: pointer;
        }

    </style>
    <script>
      function billing(){
         var a=parseInt(document.getElementById('bcake').value);
         var b=parseInt(document.getElementById('dcake').value);
         var c=parseInt(document.getElementById('pcake').value);
         var d=parseInt(document.getElementById('ucake').value);
         var price=a*200+b*250+c*300+d*400;
         document.getElementById('result').innerHTML='Total Price='+price;
      }
    </script>
</head>
<body>
   <header>
      <h1 style="color: black;font-size: xx-large;font-family: 'Franklin Gothic Medium',
'Arial Narrow', Arial, sans-serif;">Cake World</h1>
   </header>
   <div class="t">
      <div class="t1" style="font-size: x-large;">
         <img src="bf.jpg" alt="I1">
         <div class="c">Black forest Cake-Rs200</div>
      </div>
      <div class="t1" style="font-size: x-large;">
         <img src="wf.jpg" alt="I2">
         <div class="c">White Cake-Rs250</div>
      </div>
      <div class="t1" style="font-size: x-large;">
         <img src="cosc.jpg" alt="I3">
         <div class="c">Cosco Cake-Rs300</div>
      </div>
```

```html
        <div class="t1" style="font-size: x-large;">
          <img src="rf.jpg" alt="I3">
          <div class="c">Red Velvet Cake-Rs400</div>
        </div>
      </div>
    <div class="order" >
      <h2 align="center" style="font-size: x-large;"> Place your Order Here</h2>
        <label for="bcake">Black Forest(Quantity):</label><br>
        <input type="text" id="bcake" name="bcake" ><br><br>
        <label for="dcake">White Forest(Quantity):</label><br>
        <input type="text" id="dcake" name="dcake" ><br><br>
        <label for="pcake">Cosco Cake(Quantity):</label><br>
        <input type="text" id="pcake" name="pcake" ><br><br>
        <label for="ucake">Red Velvet Cake(Quantity):</label><br>
        <input type="text" id="ucake" name="ucake" ><br><br>
        <button onclick="billing()">Place Order</button>
        <hr>
        <h2 align="center">Purchase Order Bill</h2>
        <p align="center" id="result">Total Price</p>
      </form>
    </div>
  </body>
  </html>
```
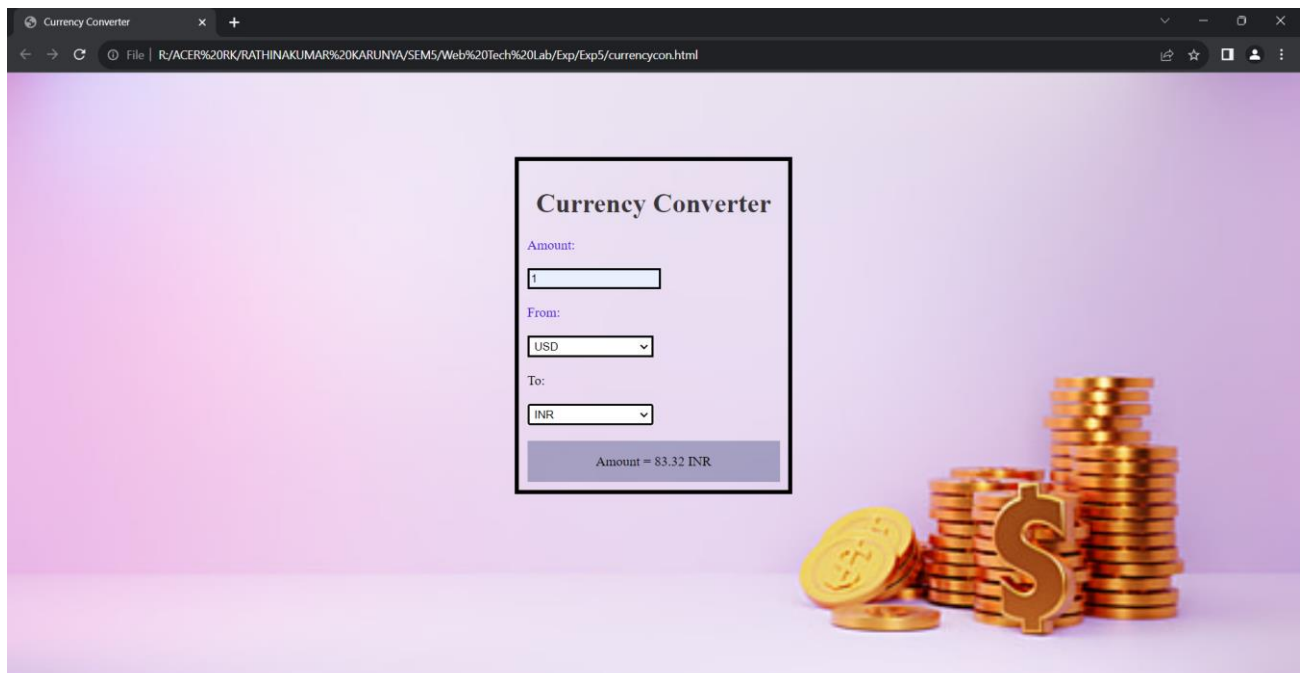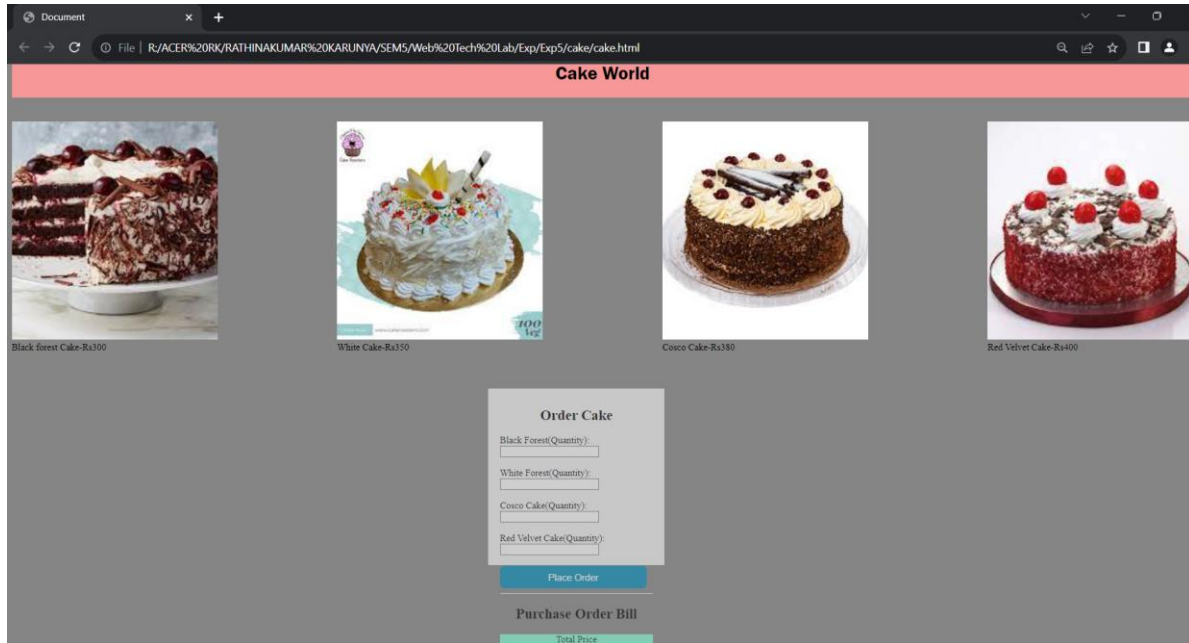
Output:

1.

2.

Result:

The program is executed successfully and the program output is displayed in the web browser.