Name:Manoj R	SRN:PES2UG23CS328	Section:E
	Date:03/10/2024	Unit 2 Assignment Exercise

TASK 1

Q1) Write a code to get the output shown below using SVG/Canvas which include:
1. **A rectangle with border and stroke**
2. **An ellipse with linear gradient**
3. **An arc using canvas**
4. **A line**
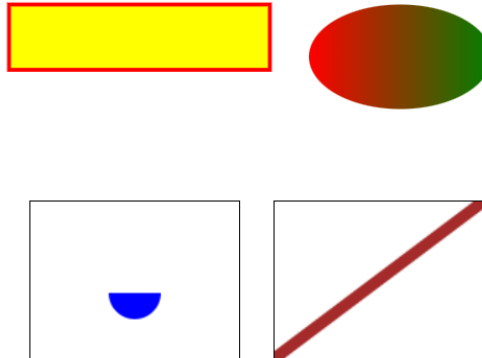
```html
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta name="viewport" content="width=device-width, initial-scale=1.0">
6       <title>SVG and Canvas Output</title>
7       <style>
8           canvas {
9               border: 1px solid ☐black;
10          }
11      </style>
12  </head>
13  <body>
14
15      <h2></h2>
16      <canvas id="myCanvas" width="200" height="200"></canvas>
17
18      <h2></h2>
19
20      <svg width="500" height="200">
21
22          <rect x="10" y="10" width="100" height="50" fill="yellow" stroke="red" stroke-width="5" />
23
24          <defs>
25              <linearGradient id="grad1" x1="0%" y1="0%" x2="100%" y2="0%">
26                  <stop offset="0%" style="stop-color:☐rgb(255, 13, 0);stop-opacity:1" />
27                  <stop offset="100%" style="stop-color:☐rgb(0,128,0);stop-opacity:1" />
28              </linearGradient>
29          </defs>
30          <ellipse cx="250" cy="35" rx="80" ry="35" fill="url(#grad1)" />
31
32       <line x1="150" y1="150" x2="300" y2="80" stroke="brown" stroke-width="5" stroke="black" stroke-linecap="round" />
33
34
35      </svg>
36
37      <script>
```
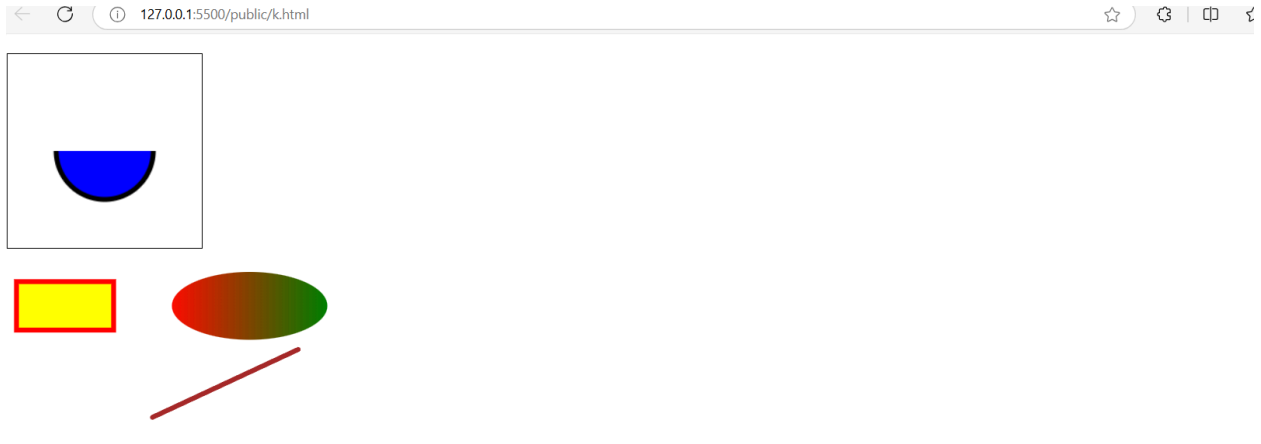
```html
37          <script>
38
39              const canvas = document.getElementById('myCanvas');
40              const ctx = canvas.getContext('2d');
41
42              ctx.beginPath();
43              ctx.arc(100, 100, 50, 0, Math.PI, false);
44              ctx.fillStyle = 'blue';
45              ctx.fill();
46              ctx.lineWidth = 5;
47              ctx.strokeStyle = 'black';
48              ctx.stroke();
49          </script>
50
51      </body>
52  </html>
```

Q2) Write jQuery code to accomplish the following:

1. **Create a button that, when clicked, will cause the text in a specified paragraph to first fade out, slide up and then immediately slide down, demonstrating the use of jQuery method chaining to create a smooth animation effect.**

Before:

Method chaining

Click

After:

Method Chaining

Click

Click

Method chaining

Click

```html
1    <!DOCTYPE html>
2    <html lang="en">
3    <head>
4        <meta charset="UTF-8">
5        <meta name="viewport" content="width=device-width, initial-scale=1.0">
6        <title>jQuery Animation</title>
7        <style>
8            p {
9                margin: 20px 0;
10               padding: 10px;
11               border: 1px solid ■#ccc;
12           }
13       </style>
14       <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
15   </head>
16   <body>
17       <h2>Method chaining</h2>
18       <p id="myParagraph">Method Chaining</p>
19       <button id="animateBtn">Click</button>
20
21       <script>
22           $(document).ready(function() {
23               $("#animateBtn").click(function() {
24                   $("#myParagraph").fadeOut(1000)
25                                    .slideUp(1000)
26                                    .slideDown(1000);
27               });
28           });
29       </script>
30   </body>
31   </html>
```

Method chaining

Method Chaining

Click

Method chaining

Method Chaining

Click

2. **Create an input field to filter elements by class. When the user clicks the "Filter" button,**

   a)Hide all elements and

   b)Display only those that match the entered class.

   Before:

   | Enter class to filter | Filter |

   III Sem Subjects

   DDCO

   DSA

   MCSE

   WT

   AFLL

   After:

   | intro | Filter |

   DDCO

   DSA

   WT

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Filter Subjects</title>
    <style>
        .subject {
            margin: 10px 0;
            padding: 5px;
            border: 1px solid #ccc;
        }
    </style>
    <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
    <h3>III Sem Subjects</h3>
    <input type="text" id="classInput" placeholder="Enter class to filter">
    <button id="filterBtn">Filter</button>
    <div class="a">
    <li class="subject">DDCO</li>
    <li class="subject">DSA</li>
    </div>
    <div class="b">
    <li class="subject">MCSE</li>
    <li class="subject">WT</li>
    <li class="subject">AFLL</li>
    </div>
```
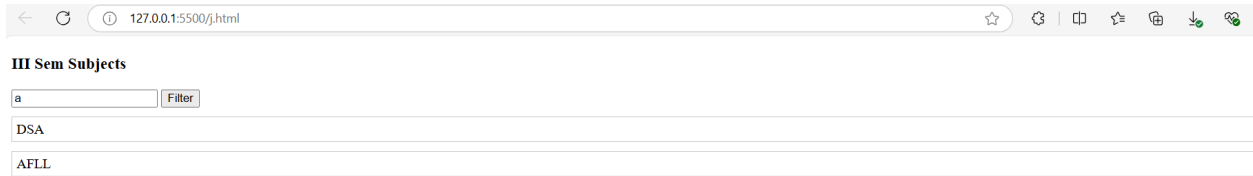
```html
</head>
<body>
    <h3>III Sem Subjects</h3>
    <input type="text" id="classInput" placeholder="Enter class to filter">
    <button id="filterBtn">Filter</button>
    <div class="a">
    <li class="subject">DDCO</li>
    <li class="subject">DSA</li>
    </div>
    <div class="b">
    <li class="subject">MCSE</li>
    <li class="subject">WT</li>
    <li class="subject">AFLL</li>
    </div>

    <script>
        $(document).ready(function() {
            $("#filterBtn").click(function() {
                var inputVal = $("#classInput").val().toLowerCase();
                $(".subject").hide(); // Hide all subjects

                $(".subject").filter(function() {
                    return $(this).text().toLowerCase().indexOf(inputVal) > -1;
                }).show(); // Show only the filtered subjects
            });
        });
    </script>
</body>
</html>
```

127.0.0.1:5500/j.html

III Sem Subjects

| Enter class to filter | Filter |

DDCO

DSA

MCSE

WT

AFLL

III Sem Subjects

| a | Filter |

DSA

AFLL

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3. **Add a button that, when clicked, changes the text color of a specified element to a random color, using a fade-out and fade-in animation.**

Before :

Web Tech.

Plain text

Change Color

After:

Web Tech.

Plain text

Change Color

```html
77   <!DOCTYPE html>
78   <html lang="en">
79   <head>
80       <meta charset="UTF-8">
81       <meta name="viewport" content="width=device-width, initial-scale=1.0">
82       <title>Change Text Color with Animation</title>
83       <style>
84           .text {
85               font-size: 20px;
86               margin: 10px 0;
87           }
88           button {
89               margin-top: 20px;
90           }
91       </style>
92       <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
93   </head>
94   <body>
95       <h3>Before :</h3>
96       <div class="text" id="webtech">Web Tech.</div>
97       <div class="text" id="plaintext">Plain text</div>
98
99       <button id="changeColorBtn">Change Color</button>
100
101      <script>
102          $(document).ready(function() {
103              $("#changeColorBtn").click(function() {
```
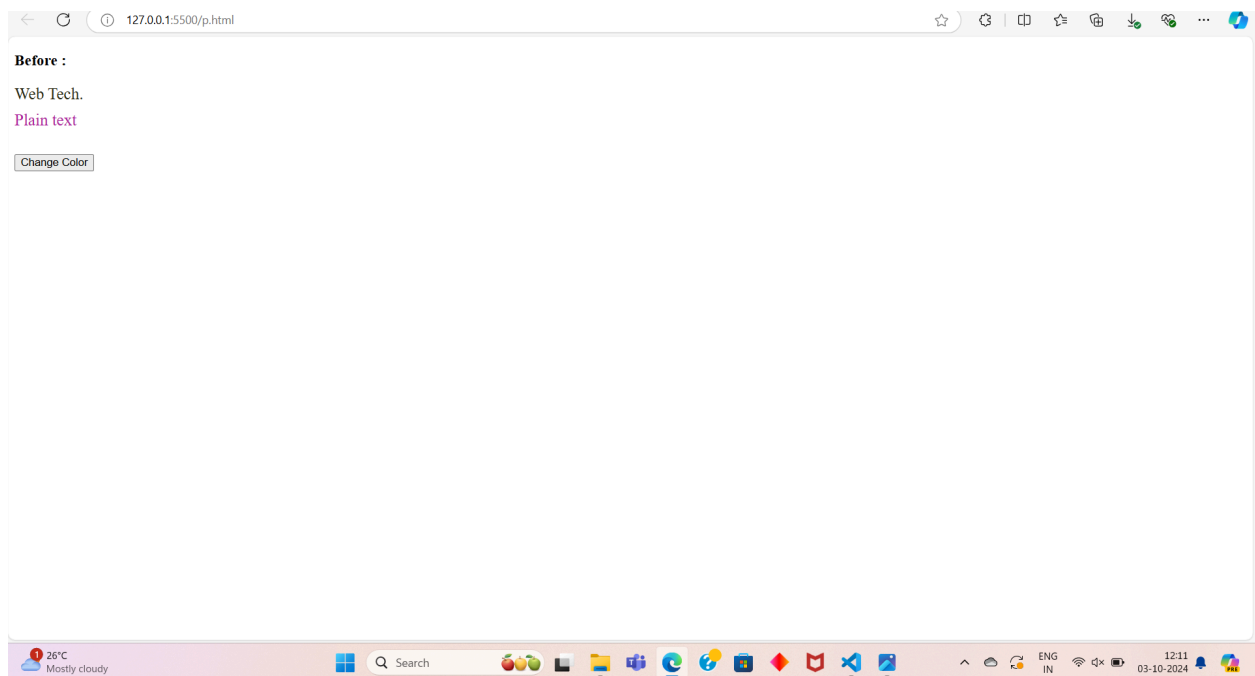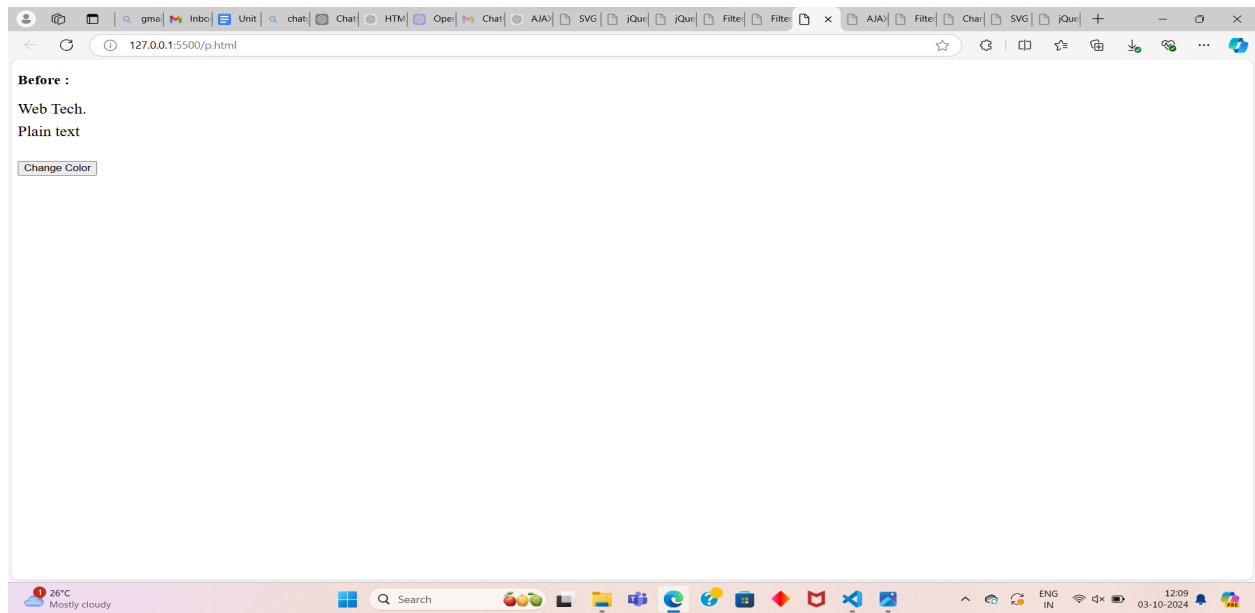
```html
102          $(document).ready(function() {
103              $("#changeColorBtn").click(function() {
104
105                  function getRandomColor() {
106                      var letters = '0123456789ABCDEF';
107                      var color = '#';
108                      for (var i = 0; i < 6; i++) {
109                          color += letters[Math.floor(Math.random() * 16)];
110                      }
111                      return color;
112                  }
113
114
115                  $(".text").fadeOut(500, function() {
116                      var newColor = getRandomColor();
117                      $(this).css("color", newColor);
118                      $(this).fadeIn(500);
119                  });
120              });
121          });
122      </script>
123  </body>
124  </html>
```
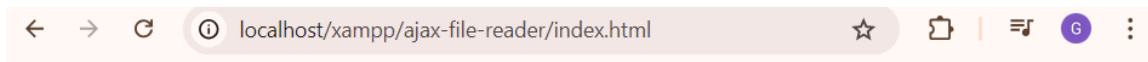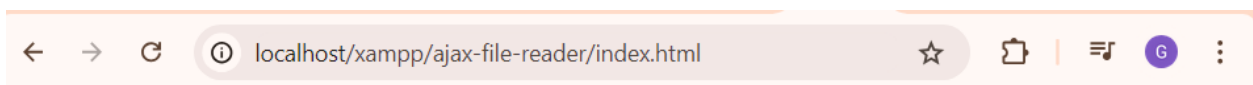
Before :

Web Tech.

Plain text

[Change Color]

Before :

Web Tech.

Plain text

[Change Color]

Q3) Write a file using HTML, CSS, Javascript and AJAX file using XHR to read text file and displays the response on the page

Before :

After:


```
<> index.html > ...
  1    <!DOCTYPE html>
  2  ∨ <html lang="en">
  3  ∨ <head>
  4        <meta charset="UTF-8">
  5        <meta name="viewport" content="width=device-width, initial-scale=1.0">
  6        <title>AJAX File Reader</title>
  7        <link rel="stylesheet" href="style.css">
  8    </head>
  9  ∨ <body>
 10        <h1>Web Technologies Read text file using XHR</h1>
 11        <button id="readFileBtn">CLICK To Read Text File</button>
 12        <div id="fileContent"></div>
 13
 14        <script src="script.js"></script>
 15    </body>
 16    </html>
 17    |
```

```css
# style.css > ...
    7    #readFileBtn {
    8        padding: 10px 20px;
    9        font-size: 16px;
   10        background-color: ■#4CAF50;
   11        color: ■white;
   12        border: none;
   13        cursor: pointer;
   14    }
   15
   16    #readFileBtn:hover {
   17        background-color: ■#45a049;
   18    }
   19
   20    #fileContent {
   21        margin-top: 20px;
   22        font-size: 18px;
   23        color: □#333;
   24    }
```

```js
JS script.js > ⊙ addEventListener('click') callback
    1    document.getElementById('readFileBtn').addEventListener('click', function() {
    2
    3        var xhr = new XMLHttpRequest();
    4
    5        xhr.open('GET', 'sample.txt', true);
    6
    7        xhr.onload = function() {
    8            if (xhr.status == 200) {
    9
   10                document.getElementById('fileContent').innerText = xhr.responseText;
   11            } else {
   12
   13                document.getElementById('fileContent').innerText = "Error: File not found";
   14            }
   15        };
   16
   17
   18        xhr.send();
   19    });
```

Web Technologies Read text file using XHR

CLICK To Read Text File

Web Technologies Read text file using XHR

CLICK To Read Text File

Error: File not found

*****