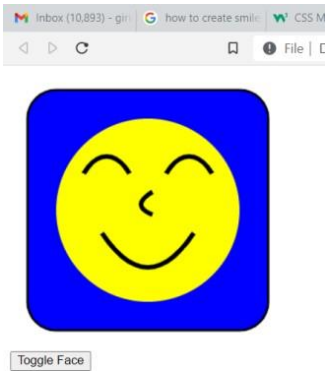
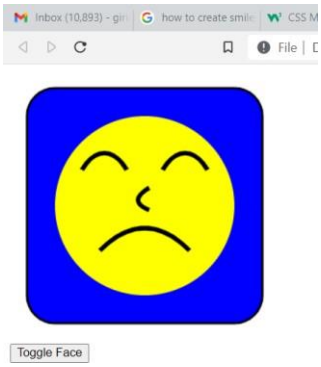
A3.Create an HTML5 web page which shows a smiling face initially. On every click of'Toggle Face' button display should toggle between smiling face and sad face.
Note: Use only one button. And faces should be drawn using canvas element. Facesmust be exactly like the following screen shots.





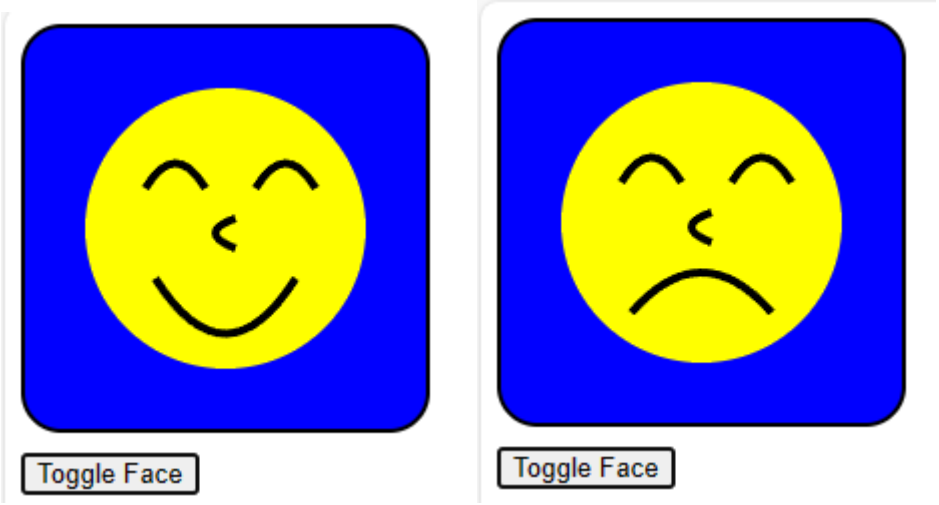
****

```
<!DOCTYPE html>
<html>
<head>
<title>Toggle Face</title>
<style>
 #canvas-container
{
    border: 2px solid black;
    width: 200px;
   height: 200px;
   display: flex;
   justify-content: center;
   align-items: center;
   border-radius: 20px;
  background-color: blue;
  margin-bottom: 10px;
}
</style>
</head>
<body>
 <div id="canvas-container">
     <canvas id="faceCanvas" width="150" height="150"></canvas>
 </div>
 <button onclick="toggleFace()">Toggle Face</button>
<script>
          var canvas = document.getElementById("faceCanvas");
          var ctx = canvas.getContext("2d");
           var isSmiling=true;

// Function to draw a smiling face
function drawSmile()
{
  //draw circle
```

```
    ctx.clearRect(0,0,canvas.width,canvas.height);
    ctx.beginPath();
   ctx.arc(75,75,70,0,Math.PI*2);
   ctx.fillStyle="yellow";
   ctx.fill();

  //draw eyes
   ctx.beginPath();
   ctx.moveTo(35,55);
   ctx.quadraticCurveTo(50,30,65,55);
   ctx.strokeStyle="#000";
   ctx.lineWidth=4;
   ctx.stroke();

   ctx.beginPath();
   ctx.moveTo(90,55);
   ctx.quadraticCurveTo(105,30,120,55);
   ctx.strokeStyle="#000";
   ctx.lineWidth=4;
   ctx.stroke();

  //draw nose
   ctx.beginPath();
   ctx.moveTo(80,70);
   ctx.quadraticCurveTo(60,77,80,85);
   ctx.strokeStyle="#000";
   ctx.lineWidth=4;
   ctx.stroke();

//draw lips
   ctx.beginPath();
   ctx.moveTo(40,100);
   ctx.quadraticCurveTo(75,155,110,100);
   ctx.strokeStyle="#000";
   ctx.lineWidth=4;
   ctx.stroke();
}

// Function to draw a sad face
function drawSad()
{

 //draw circle
  ctx.clearRect(0,0,canvas.width,canvas.height);
  ctx.beginPath();
  ctx.arc(75,75,70,0,Math.PI*2);
  ctx.fillStyle="yellow";
  ctx.fill();
```

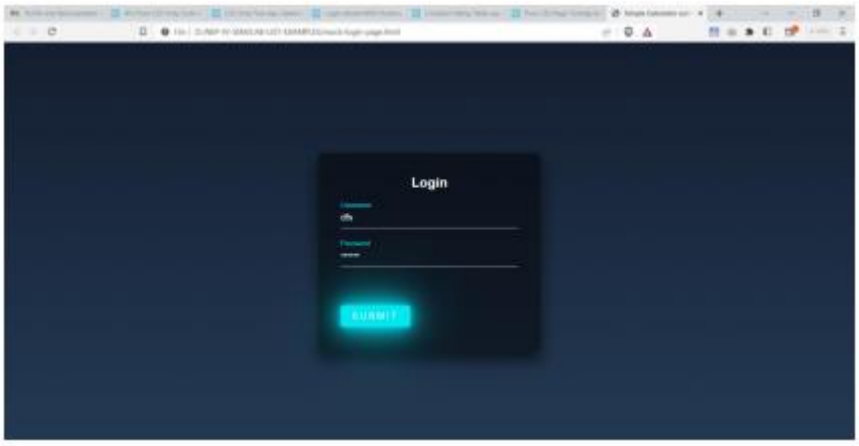
```
//draw eyes
   ctx.beginPath();
   ctx.moveTo(35,55);
   ctx.quadraticCurveTo(50,30,65,55);
   ctx.strokeStyle="#000";
   ctx.lineWidth=4;
   ctx.stroke();

   ctx.beginPath();
   ctx.moveTo(90,55);
   ctx.quadraticCurveTo(105,30,120,55);
   ctx.strokeStyle="#000";
   ctx.lineWidth=4;
   ctx.stroke();

 //draw nose
  ctx.beginPath();
  ctx.moveTo(80, 70);
  ctx.quadraticCurveTo(60, 77, 80, 85);
  ctx.strokeStyle="#000";
  ctx.lineWidth=4;
  ctx.stroke();

//draw lips
 ctx.beginPath();
 ctx.moveTo(40,120);
 ctx.quadraticCurveTo(75,80,110,120);
 ctx.strokeStyle="#000";
 ctx.lineWidth=4;
 ctx.stroke();
}
// Function to toggle between the smiling and sad face
function toggleFace()
{
  if(isSmiling)
 {
    drawSad();
    isSmiling = false;
}
else
{
    drawSmile();
    isSmiling = true;
}
}
// Initial drawing of the smiling face
drawSmile();
```

```
</script>
</body>
</html>
```



****

A4)Design a mock login page and style it using CSS3. Initially login page should look like the following screen shot.And while mouse is hovered on SUBMIT button it should look like



****

Parta.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Home</title>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width" />
    <link rel="stylesheet" href="styles.css" />
  </head>
  <body>
    <div class="container">
      <div class="center">
        <h1>Login</h1>
        <form action="" method="POST">
```

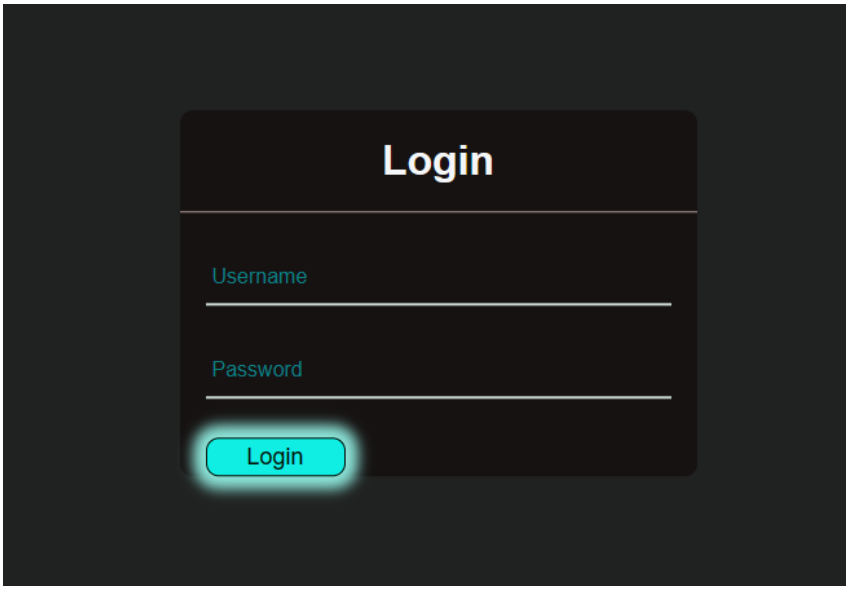
```
            <div class="txt_field">
               <input type="text" name="text" required>
               <span></span>
               <label>Username</label>
            </div>
            <div class="txt_field">
               <input type="password" name="password" required>
               <span></span>
               <label>Password</label>
            </div>
              <input name="submit" type="Submit" value="Login">
          </form>
      </div>
    </div>
  </body>
</html>
```

Styles.css

```
body{
  margin: 0;
  padding: 0;
  font-family: Arial;
 background:#202221;
  height:100vh;

}
.center{
  position: absolute;
  top: 50%;
  left: 50%;
    transform: translate(-50%, -50%);
  width: 400px;
  background: rgb(22, 18, 18);
  border-radius: 10px;
}
.center h1{
  text-align: center;
  padding: 0 0 20px 0;
  border-bottom: 1px solid rgb(175, 154, 154);
  color: #f4f6f7;
}

.center form{
  padding: 0 20px;
 }
```

```
form .txt_field{
  position: relative;
  border-bottom: 2px solid #ccdbd6;
  margin: 30px 0;

}
.txt_field input{
  width: 100%;
  padding: 0 5px;
  height: 40px;
  font-size: 16px;
  border: none;
  background: none;
  outline: none;
  color:#ccdbd6;
}

.txt_field label{
  position: absolute;
  top: 50%;
  left: 5px;
  color: #0d7f83;
  transform: translateY(-50%);
  font-size: 16px;
  pointer-events: none;
}

.txt_field span::before{
  content: '';
  position: absolute;
  top: 40px;
  left: 0;
  width: 0px;
  height: 2px;
  background: #e8ebee;
  transition: .5s;
}

.txt_field input:focus ~ label,
.txt_field input:valid ~ label{
  top: -5px;
  color: #087441;
}

input[type="Submit"]{
  width: 30%;
  height: 30px;
  border: 1px solid;
```

```
  border-radius: 10px;
  font-size: 18px;
  font-weight: 500;
  cursor: pointer;
  background: #06ffde;
  box-shadow:0px 0px 15px 8px hsl(183, 92%, 49%),
}
input[type="Submit"]:hover{
  background: #10eee3;
  color: #020f05;
  transition: .2s;
  box-shadow: 0 0 10px 10px #8de6da;
}
```



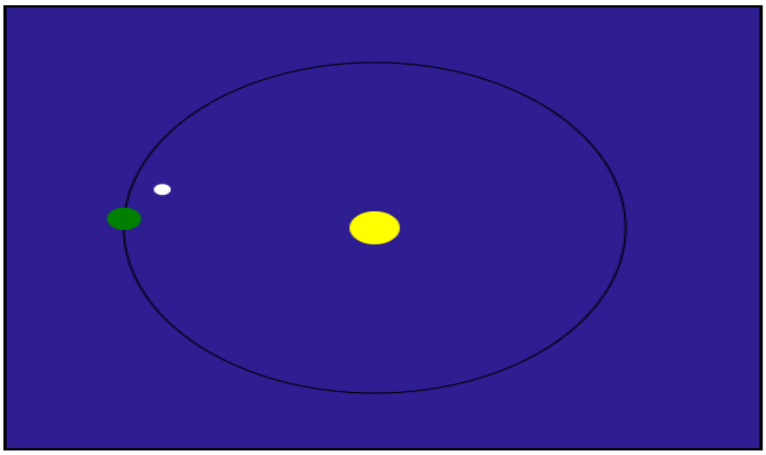
****

A5.Create a web page to model solar system using canvas element animation, where it contains sun, earth and moon (all must be created using canvas shapes not images).Earth should revolve around sun and moon should revolve around earth simultaneously. Sample screen shot below:

****

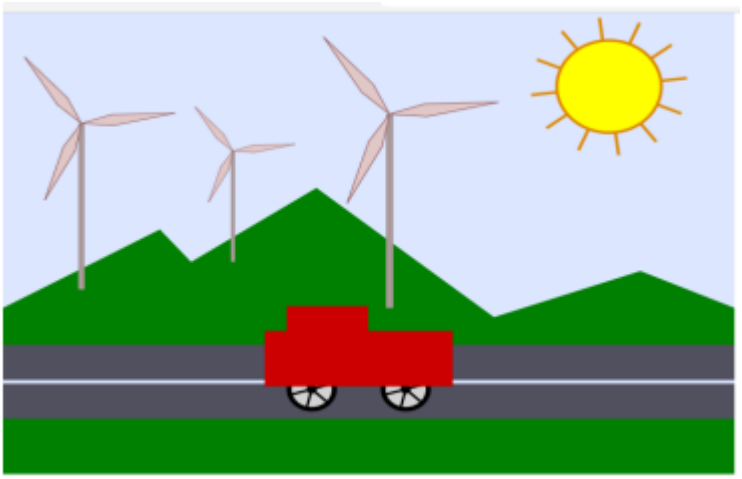
```
<html>
<head><title>canvas</title></head>
<script>

function draw()
{
     var c=document.getElementById("t");
     var c1=c.getContext('2d');

// Clear the canvas and draw the background

     c1.fillStyle="#2F1D92";
     c1.fillRect(0,0,450,400);
     c1.save();

//draw sun
    c1.translate(220,  200);
    c1.fillStyle  =  "yellow";
    c1.beginPath();
    c1.arc(0,0, 15, 0, Math.PI * 2, true);
    c1.fill();

//draw the earth orbit
   c1.strokeStyle   =   "black";
   c1.beginPath();
   c1.arc(0, 0, 150, 0, Math.PI * 2);
   c1.stroke();

  const time = new Date();
  c1.rotate(((2 * Math.PI) / 60) * time.getSeconds() +
     ((2 * Math.PI) / 60000) * time.getMilliseconds());
// Draw the earth
```

```
c1.translate(150,  0);
c1.fillStyle  =  "green";
c1.beginPath();
c1.arc(0,0, 10, 0, Math.PI * 2, true);
c1.fill();

c1.rotate( ((2 * Math.PI) / 6) * time.getSeconds() +((2 * Math.PI) / 6000) * time.getMilliseconds());

c1.translate(0,  35);
c1.fillStyle  =  "white";
c1.beginPath();
c1.arc(0,0, 5, 0, Math.PI * 2, true);
c1.fill();

c1.restore()
setInterval(draw, 100);
}
</script>
<body onload="draw();">
<canvas id="t" width="450" height="400" style="border:2px solid black;"></canvas>

</body>
</html>
```



****

A6. Create the following drawing in html page using only SVG



```
<!DOCTYPE html>
<html>
<head>
</head>
<title> SVG- CART </title>
<body>
  <svg height="400" width="550" xmlns="http://ww.w3.org/2000/svg">
<g>

<rect x="0" y="0" width="550" height="450" fill="rgb(220,230,255)"/>
<polygon points="0,400 0,240 100,175 130,200 230,135 400,240 490,210 550,240 550,450" fill="green"/>
<rect x="0" y="280" width="550" height="60" fill="rgb(80,80,95)"/>
<line x1="0" y1="310" x2="550" y2="310" style="stroke:white; stroke-width:3;"/>

<line x1="390" y1="65" x2="510" y2="65" stroke="#dd8800" stroke-width="2.5" transform="rotate(0)"/>
<line x1="390" y1="65" x2="510" y2="65" stroke="#dd8800" stroke-width="2.5"
transform="rotate(30,450,65)"/>
<line x1="390" y1="65" x2="510" y2="65" stroke="#dd8800" stroke-width="2.5"
transform="rotate(60,450,65)"/>
<line x1="390" y1="65" x2="510" y2="65" stroke="#dd8800" stroke-width="2.5"
transform="rotate(90,450,65)"/>
<line x1="390" y1="65" x2="510" y2="65" stroke="#dd8800" stroke-width="2.5"
transform="rotate(120,450,65)"/>
<line x1="390" y1="65" x2="510" y2="65" stroke="#dd8800" stroke-width="2.5"
transform="rotate(150,450,65)"/>

<circle cx="450" cy="65" r="40" stroke="#dd8800" stroke-width="2.5" fill="yellow"/>

<g id="windmill">
<rect x="50" y="75" width="5" height="150" fill="#aa9999"/>
  <g id="vane">
<polygon points="52.5,75 77.5,70 127.5,75 77.5,80" fill="rgb(225,200,200)" stroke="rgb(150,100,100)"
stroke-width="1"/>
 </g>
            <use xlink:href="#vane" transform="rotate(120,52.5,75)"/>
            <use xlink:href="#vane" transform="rotate(240,52.5,75)"/>
   </g>
```

```
        <use xlink:href="#windmill" transform="translate(135,50) scale(0.65)" />
        <use xlink:href="#windmill" transform="translate(245,3) scale(1.05)" />
   <g id="wheel">
        <circle cx="240" cy="315" r="17" stroke="black"/>
        <circle cx="240" cy="315" r="14" fill="white"/>


<line x1="226" y1="315" x2="254" y2="315" stroke="black" stroke-width="2"/>
<line x1="226" y1="315" x2="254" y2="315" stroke="black" stroke-width="2"
transform="rotate(120,240,315)"/>
<line x1="226" y1="315" x2="254" y2="315" stroke="black" stroke-width="2"
transform="rotate(240,240,315)"/>
</g>

        <use xlink:href="#wheel" transform="translate(85,0)"/>
        <rect x="200" y="263" width="170" height="50" fill="#cc0000"/>
        <rect x="220" y="233" width="70" height="32" fill="#cc0000"/>

   </g>
  </svg>
</body>
</html>
```