**Day 2 Lab Assignments**

1. , Use Svg and draw simple face (use circles and ellipses) and handle when mouse over on each part (eyes, mouse, and nose) its background color changes, and back to its original color onmouseover.
   1. Instead of drawing face, search for SVG image for human face or human body, and redo the same assignment.
2. Use canvas, on a page on its load draw the given sad face on a canvas (Draw image), on mouse is down change the image to smiley face and scale its width, and on mouse is up it backs to sad face and normal scale.
3. Draw a circle and fill it using semi-transparent color, and write your name inside the circle in a big font and fill the name using gradient color.
4. Use HTML5 drag and drop, to do the following assignment:

Make a div with width and height: 100px, and make a border and background color for it, and make an image that can be dragged and dropped on the div.

* 1. Make the image back to its original position if dragged to any place rather than the div (**Bonus**).
  2. Change the div background when the image is dropped over the div (**Bonus**).

1. Draw your own Avatar (Use SVG or Canvas).

**Bonus Assignments:**

1. Create some SVG drawings (Circle, rectangle, square...), in the left side of page as a toolbox, and beside them make a canvas and when drag a shape and drop it on the canvas, draw it in the canvas.
2. Make animated bar chart (bars or lines or pie chart) using canvas (changed values every interval).
3. Enhance the button created in first assignment using gradient color and any other effects.
4. Draw smiley face that converted to sad face when clicked (using drawings not images, in a Canvas).
5. Make animated bar chart (changed values every interval).

**Enrich your Skills (big bouns!):**

1. Search for **D3.js library**, and make a demo on it.
2. Search for **SVG.js library**, and make a demo on it.
3. Search for **three.js Library**, and make a demo on it.
4. Follow the following examples for:
   * <https://css-tricks.com/click-svg-to-focus/>
   * <https://codepen.io/miguelra/pen/NAjNYA>
   * <https://codepen.io/manabox/pen/BvmCE>
5. Follow the following tutorials to make interactive SVG clickable maps:
   * <http://www.creativebloq.com/netmag/create-responsive-svg-image-maps-51411831>
   * <https://www.jonathan-petitcolas.com/2013/07/18/create-clickable-svg-france-regions-map.html>
   * JQuery library for SVG maps: <https://jqvmap.com>
6. Follow the following SVG examples, and redo them by yourself:
   * <https://www.w3schools.com/graphics/tryit.asp?filename=trysvg_polygon3>
   * <https://www.w3schools.com/graphics/tryit.asp?filename=trysvg_path>
   * <https://www.w3schools.com/graphics/tryit.asp?filename=trysvg_text>
   * <https://www.w3schools.com/graphics/tryit.asp?filename=trysvg_text5>
   * <https://www.w3schools.com/graphics/tryit.asp?filename=trysvg_animatemotion>
   * <https://www.w3schools.com/graphics/tryit.asp?filename=trysvg_animatemotion2>
7. Review the following Google Maps API tutorial, and apply a demo on it: <https://www.w3schools.com/graphics/google_maps_intro.asp>
8. Review the following Canvas demos, and redo it by yourself: <http://corehtml5canvas.com/code-live>

<https://developer.mozilla.org/en-US/docs/Games/Tutorials/2D_Breakout_game_pure_JavaScript>

1. Review the following canvas demo, and redo it by yourself: <https://www.w3schools.com/graphics/tryit.asp?filename=trycanvas_clock_start>

<https://developer.mozilla.org/en-US/docs/Games/Tutorials/2D_Breakout_game_pure_JavaScript>

**<Thank>YOU </Thank>**