introduction to media computing
Assignment 01

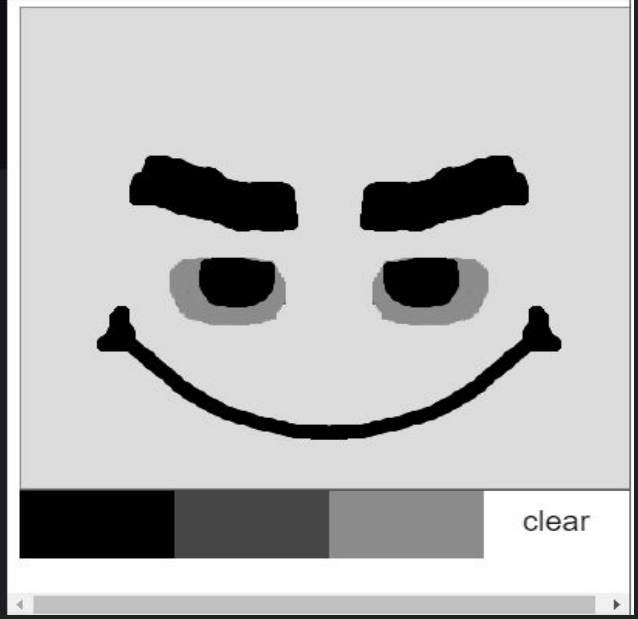
Example skeleton code

JS

```
//  GLOBAL variables
let active_brush = 0; //  Active Brush INDEX
let active_color = 0; //  Active Color Index

let color_0 = 0; //  Brush Color #0, BLACK
let color_1 = 70; //  Brush Color #1, GRAY
let color_2 = 140; //  Brush Color #2, LIGHT
GRAY

let back_color = 220; //  Drawing Area
Background color

function setup() {
  createCanvas(400, 400);
  background(back_color);
  noStroke();
  textSize(20);

  //  Draw the menu bar (we only draw once)
  //  Area #0, a BLACK area
  fill(color_0);
  rect(0, 350, 100, 50);

  //  Area #1, a DARK GRAY area
  fill(color_1);
```

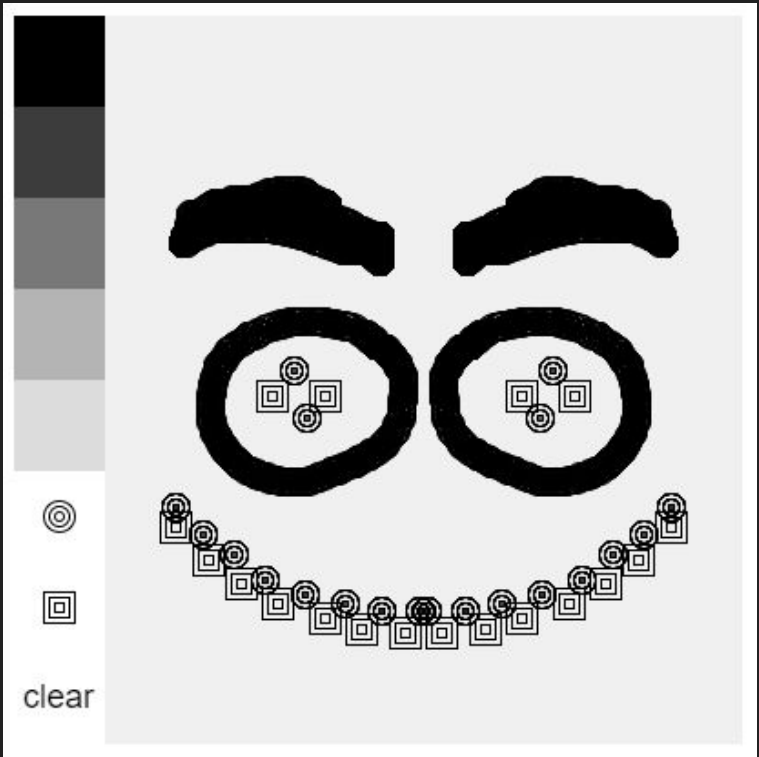
Result

EDIT ON CODEPEN



A simplified skeleton sketch as shown is provided as a basic framework for you to start coding your own nano painting app.

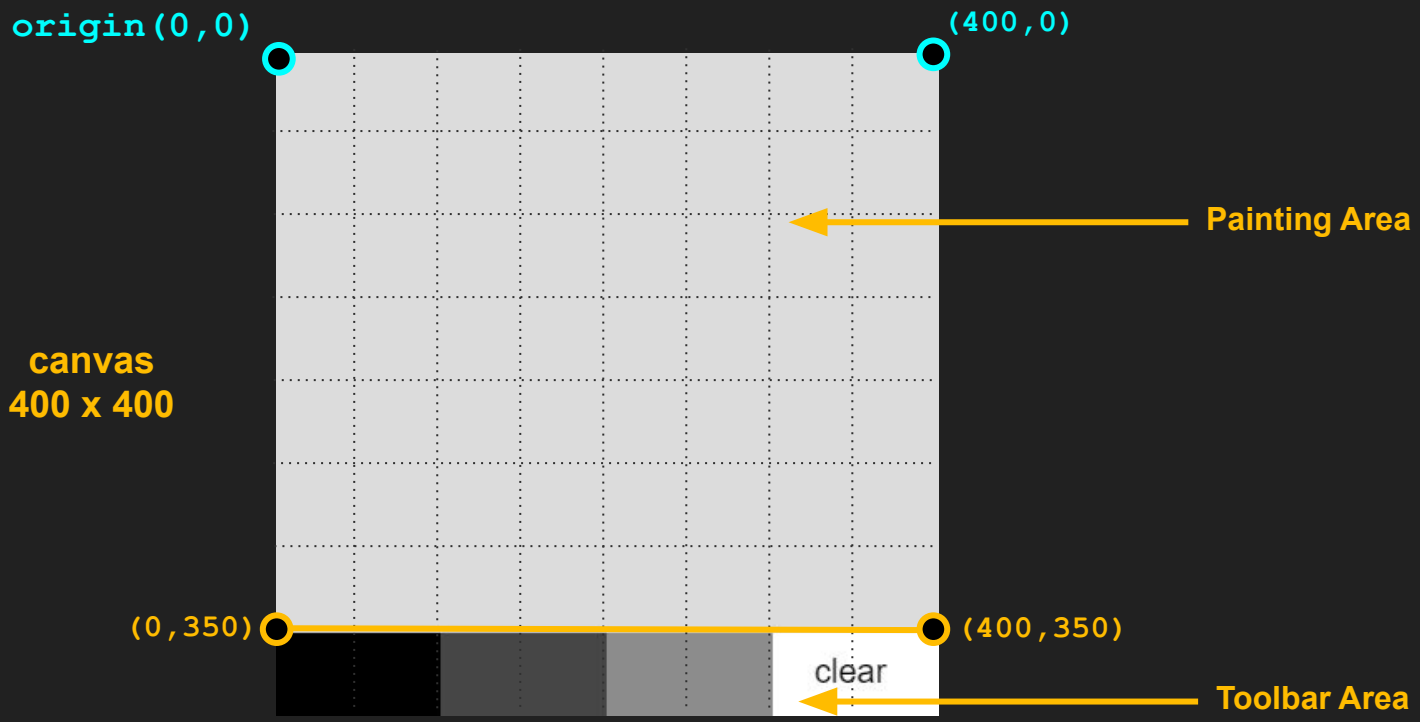
Your Assignment



REQUIREMENTS

1. Use a 400 x 400 canvas
2. TOOLBAR A vertical toolbar on the LEFT with at least 4 colors and 2 brushes to choose from.
3. BRUSHES must be visualized on the toolbar, and EACH brush uses a `while()` loop to draw.
4. Symmetric painting behaviour similar to the one in the sample app.
5. All code must be well formatted and FULLY documented.

Example skeleton



a1_skeleton.html code structure

Line 6 - 14
Global variables declaration and initialization.

active_color and active_brush are variables to store currently active (user chosen) color (and brush).

color_0, color_1, and color_2 allow us to redefine brush colors quickly.

back_color background color

```
let active_brush = 0;
...

function setup() {
  // draw toolbar at the bottom
}

function draw() {
  if (mouseIsPressed) {
      if (mouseY > 350) {
         // toolbar clicks
      else {
         // drawing
      }
  }
}
```

a1_skeleton.html code structure

Line 16 - 42

Draws the user interface ONCE.

```
let active_brush = 0;
...

function setup() {
  // draw toolbar at the bottom
}

function draw() {
  if (mouseIsPressed) {
      if (mouseY > 350) {
         // toolbar clicks
      else {
         // drawing
      }
  }
}
```

a1_skeleton.html code structure

`mouseY > 350`

lines 52 - 63

Classifies where the user is clicking to decide 'which color' the user has chosen, and stores the choice as a number into `active_brush` and `active_color`.

lines 64-68

The user is clicking on the 'clear' button, so it overpaints the drawing area using a rectangle using the `back_color`.

```
let active_brush = 0;
...

function setup() {
  // draw toolbar at the bottom
}

function draw() {
  if (mouseIsPressed) {
      if (mouseY > 350) {
          // toolbar clicks
      else {
          // drawing
      }
  }
}
```

a1_skeleton.html code structure

lines 71 - 95

Draws rectangle or ellipse according to the value of `active_brush` and `active_color` using if-else blocks

```
let active_brush = 0;
...

function setup() {
  // draw toolbar at the bottom
}

function draw() {
  if (mouseIsPressed) {
      if (mouseY > 350) {
         // toolbar clicks
      else {
         // drawing
      }
  }
}
```

Submission:

Your submission sketch must be saved as a self-contained HTML file (ready to run in a browser). Name your .html file `imc_a1_<SIS_ID>.html`, and then zip it into a ZIP archive.

Name your .zip archive as `imc_a1_<student_no>.zip`

`Example: imc_a1_55123456.zip`

Submit your `.zip` via Canvas on or before Sept. 30 (Mon) 23:59