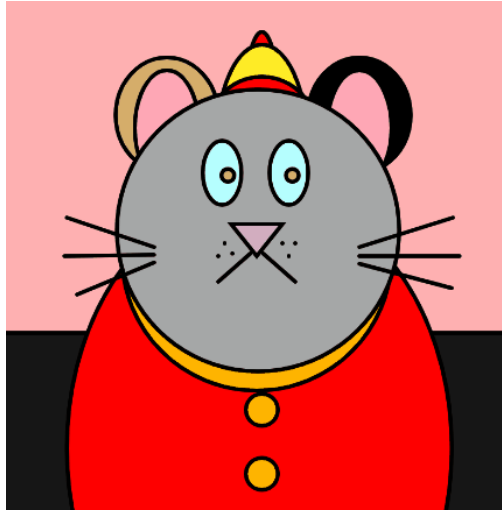


# Little Mouse



For the mini-animation assignment, we used code to draw this animation by drawing a picture of a little mouse. To illustrate this, change the mouse's hat color at random, then change the background color by dragging the mouse along the X-axis. You can also rotate the eyes along the X-axis.

## Here is code that we use to do this animation

```
1 let x1 = 0;
2 let y = 0;
3 let xx = 0;
4 let yy = 0;
5 let s, q, s2, q2;
6 function setup() {
7   createCanvas(400, 400); //create canvas 400*400
8   background(60, 540, 42); // set base gb color
9 }
10 function draw() {
11   drawbg();
12   drawhat();
13   drawear();
14   drawshirts();
15   drawneck();
16   drawbuttons();
17   drawface();
18   drawnose();
19   drawmouth();
20   draweye();
21   blackeye();
22   drawleftmoustache();
23   drawrightmoustache();
24 }
25 function drawbg(){
26   x = map(mouseX, 0, 100, 200, 200); // set x map mouseX
27   r = map(mouseY, 0, 100, 200, 200); // set r map mouseY
28   background(mouseX, x, r); // set bg color with mouseX that can change by silde mouse
29   fill(51); // set table color
30   rect(0, 260, 400, 300) // draw table
31 }
32 function drawhat(){
33   strokeWeight(3) // set strokeWeight
34   fill("red"); // fill red color
35   ellipse(204, 105, 30, 160); // draw hat 1
36   fill(255, random(220, 255), random(0, 255)); // set tail color
37   ellipse(204, 110, 70, 150); // draw hat 2
38   fill("red"); // fill red color
39   ellipse(204, 105, 87, 90); // draw hat 3
40 }
41 function drawear(){
42   strokeWeight(3) // set strokeWeight
43   fill("#E2C58F"); // set left ear color
44   ellipse(130, 90, 80, 90); // draw left ear
45   fill("pink"); // set inner left ear color
46   ellipse(130, 100, 50, 90); // draw inner left ear
47   fill("#000000"); // set right ear color
48   ellipse(280, 90, 80, 90); // draw right ear
49   fill("pink"); // set inner right ear color
50   ellipse(280, 100, 50, 90); // draw inner right ear
51 }
```

```
52 function drawshirts(){
53   strokeWeight(3) // set strokeWeight
54   fill("red") // set red color
55   ellipse(202, 350, 300, 400) // draw Shirts
56 }
57 function drawneck(){
58   strokeWeight(3) // set strokeWeight
59   fill(255, 202, 2) // set color of neck
60   ellipse(200, 200, 210) // draw neck
61 }
62 function drawbuttons(){
63   strokeWeight(3) // set strokeWeight
64   fill(255, 202, 2) // set Buttons
65   ellipse(204, 320, 25) // draw Buttons
66   ellipse(204, 370, 25) // draw Buttons
67 }
68 function drawface(){
69   strokeWeight(3) // set strokeWeight
70   fill(192) // set face color
71   arc(201, 180, 220, 220, 0, PI * 2); // draw face
72 }
73 function drawnose(){
74   strokeWeight(3) // set strokeWeight
75   fill(255, 204, 229, 130) // nose color
76   triangle(180, 175, 220, 175, 200, 200); // draw nose
77   point(230, 190)
78   point(220, 190)
79   point(225, 200)
80   point(175, 190)
81   point(170, 200)
82   point(181, 198)
83 }
84 function drawmouth(){
85   strokeWeight(3) // set strokeWeight
86   line(195, 198, 170, 220)
87   line(205, 198, 230, 220)
88 }
89 function draweye(){
90   if(mouseIsPressed){ // if mouse is pressed
91     strokeWeight(3) // set strokeWeight
92     fill(192) // set color while mouse is pressed
93     ellipse(173, 135, 30, 50) // draw while mouse is pressed
94     ellipse(225, 135, 30, 50) // draw while mouse is pressed
95   }
96   else{
97     strokeWeight(3) // set strokeWeight
98     fill(204, 255, 255); // set color
99     ellipse(173, 135, 30, 50) // draw
100    ellipse(225, 135, 30, 50) // draw
101  }
102 }
```

```

103 function blackeye(){
104   if(mouseIsPressed){ // if mouse is pressed
105     strokeWeight(0) // set strokeWeight
106     fill(192) // set color while mouseispressed
107     ellipse(172, 137, 10) // draw while mouse is pressed
108     ellipse(224, 137, 10) // draw while mouse is pressed
109   }
110   else{ // if not mouse is pressed ////animations
111     strokeWeight(3) // set strokeWeight
112     fill('#E2C58F') // set color
113     ellipse(xi, y, 10) // draw left eye
114     xi = 172;
115     y = 137;
116     s = (mouseX - xi) / 30
117     q = (mouseY - y) / 30
118     xi = xi + s
119     ellipse(xx, yy, 10) // draw right eye
120     xx = 224;
121     yy = 137;
122     s2 = (mouseX - xx) / 30
123     q2 = (mouseY - yy) / 30
124     xx = xx + s2
125   }
126 }
127 function drawleftmoustache(){
128   //left moustache
129   strokeWeight(3) // set strokeWeight
130   line(120, 193, 52, 170)
131   line(120, 199, 50, 200)
132   line(120, 205, 60, 230)
133 }
134 function drawrightmoustache(){
135   //right moustache
136   strokeWeight(3) // set strokeWeight
137   line(280, 193, 353, 170)
138   line(280, 200, 358, 200)
139   line(280, 206, 352, 225)
140 }

```

## From line 1 to 24

- Line 1 to 5, It is to set variables to get the value of the picture that will be shown in the output (animation).
- Line 6 to 9 for creating canvas and coloring canvas.
- Line 10 to 24 for is draw function  
Including 13 functions
  1. drawbg
  2. drawhat
  3. drawear
  4. drawshirts
  5. drawneck
  6. drawbuttons
  7. drawface
  8. drawnose
  9. drawmouth
  10. draweye
  11. blackeye
  12. drawleftmoustache
  13. drawrightmoustache

```

1  let xi = 0;
2  let y = 0;
3  let xx = 0;
4  let yy = 0;
5  let s, q, s2, q2;
6  function setup() {
7    createCanvas(400, 400); //create canvas 400*400
8    background(60, 540, 42); // set base gb color
9  }
10 function draw() {
11   drawbg();
12   drawhat();
13   drawear();
14   drawshirts();
15   drawneck();
16   drawbuttons();
17   drawface();
18   drawnose();
19   drawmouth();
20   draweye();
21   blackeye();
22   drawleftmoustache();
23   drawrightmoustache();
24 }

```

## drawbg function

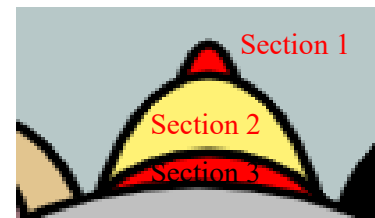
```
25 function drawbg(){
26   x = map(mouseX, 0, 100, 200, 200); // set x map mousex
27   r = map(mouseX, 0, 100, 200, 200); // set r map mousex
28   background(mouseX, x, r); // set bg color with mouseX that can change by silde mouse
29   fill(51); // set table color
30   rect(0, 260, 400, 300) // draw table
31 }
```

- Line 26 to 27 is for mapping cursor and change background color on Line 28.
- Line 29 is set to table color.
- Line 30 is draw table.

## drawhat function

```
32 function drawhat(){
33   strokeWeight(3) // set strokeWeight
34   fill("red"); // fill red color
35   ellipse(204, 105, 30, 160); // draw hat 1
36   fill(255,random(220,255),random(0,255)); // set tail color
37   ellipse(204, 110, 70, 150); // draw hat 2
38   fill("red"); // fill red color
39   ellipse(204, 105, 87, 90); // draw hat 3
40 }
```

- Line 33 is set stroke weight.
- Line 34, 38 is set hat in section 1 and 3 red.
- Line 36 is set hat in section 2 is change color at random.
- Lines 35, 37, and 39 are drawn hats by each section.



## drawear function

```
41 function drawear(){
42   strokeWeight(3) // set strokeWeight
43   fill('#E2C58F'); // set left ear color
44   ellipse(130,90,80,90); // draw left ear
45   fill("pink"); // set inner left ear color
46   ellipse(130,100,50,90); // draw inner left ear
47   fill('#000000'); // set right ear color
48   ellipse(280,90,80,90); // draw right ear
49   fill("pink"); // set inner right ear color
50   ellipse(280,100,50,90); // draw inner right ear
51 }
```

- Line 42 is set stroke weight.
- Lines 43, 45, 47, and 49 are set colors.
- Lines 44, 46, 48, and 50 are drawn as ears and inner ears.

### drawshirts function

```
52 function drawshirts(){
53   strokeWeight(3) // set strokeWeight
54   fill("red") // set red color
55   ellipse(202, 350, 300, 400) // draw Shirts
56 }
```

- Line 52 is the set stroke weight.
- Line 54 is set in red color.
- Line 55 is a draw shirt.

### drawneck function

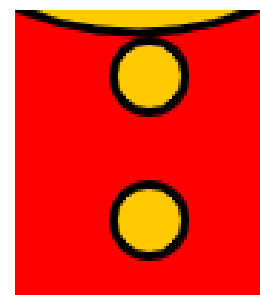
```
57 function drawneck(){
58   strokeWeight(3) // set strokeWeight
59   fill(255, 202, 2) // set color of neck
60   ellipse(200, 200, 210) // draw neck
61 }
```

- Line 58 is the set stroke weight.
- Line 59 is set color.
- Line 60 is a draw neck.

### drawbuttons function

```
62 function drawbuttons(){
63   strokeWeight(3) // set strokeWeight
64   fill(255, 202, 2) // set Buttons
65   ellipse(204, 320, 25) // draw Buttons
66   ellipse(204, 370, 25) // draw Buttons
67 }
```

- Line 63 is the set stroke weight.
- Line 64 is set color.
- Lines 65 and 66 is a draw button1 and 2.



Button 1

Button 2

## drawface function

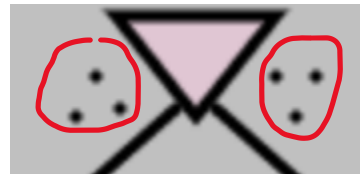
```
68  ▾ function drawface(){
69      | strokeWeight(3) // set strokeWeight
70      | fill(192) // set face color
71      | arc(201, 180, 220, 220, 0, PI * 2); // draw face
72      | }
```

- Line 69 is the set stroke weight.
- Line 70 is set color.
- Line 71 is a draw arc.

## drawnose function

```
73  ▾ function drawnose(){
74      | strokeWeight(3) // set strokeWeight
75      | fill(255, 204, 229, 130) // nose color
76      | triangle(180, 175, 220, 175, 200, 200); // draw nose
77      | point(230, 190)
78      | point(220, 190)
79      | point(225, 200)
80      | point(175, 190)
81      | point(170, 200)
82      | point(181, 198)
83      | }
```

- Line 74 is the set stroke weight.
- Line 75 is set color.
- Line 76 is a draw triangle.
- Line 77 to 82 is drawing a point.



## drawmouth function

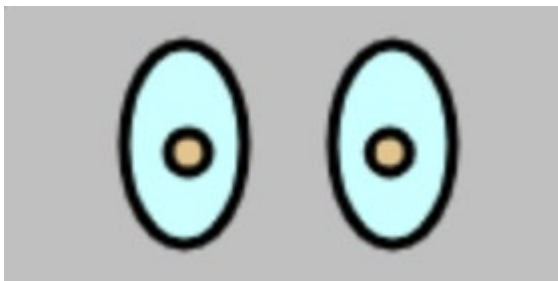
```
84  ▾ function drawmouth(){
85      | strokeWeight(3) // set strokeWeight
86      | line(195, 198, 170, 220)
87      | line(205, 198, 230, 220)
88      | }
```

- Line 85 is the set stroke weight.
- Lines 86 and 87 is draw lines.

## draweye function

```
89  function draweye(){
90      if(mouseIsPressed){ // if mouse is pressed
91          strokeWeight(3) // set strokeWeight
92          fill(192) // set color while mouse is pressed
93          ellipse(173, 135, 30, 50) // draw while mouse is pressed
94          ellipse(225, 135, 30, 50) // draw while mouse is pressed
95      }
96      else{
97          strokeWeight(3) // set strokeWeight
98          fill(204, 255, 255); // set color
99          ellipse(173, 135, 30, 50) // draw
100         ellipse(225, 135, 30, 50) // draw
101     }
102 }
```

- Line 90 create an if-else condition. If the mouse is pressed, will create
  - o Line 91 is the set stroke weight.
  - o Line 92 is set color.
  - o Lines 93 and 94 are draw left eye and right eye.
- Line 96 is else condition.
  - o Line 97 is the set stroke weight.
  - o Line 98 is set color.
  - o Lines 99 and 100 are draw left eye and right eye.



The mouse doesn't press.



The mouse is pressed.

## blackeye function

```
103 ✓ function blackeye(){
104 ✓   if(mouseIsPressed){ // if mouse is pressed
105       strokeWeight(0) // set strokeWeight
106       fill(192) // set color while mouseispressed
107       ellipse(172, 137, 10) // draw while mouse is pressed
108       ellipse(224, 137, 10) // draw while mouse is pressed
109   }
110 ✓   else{ // if not mouse is pressed ////animations
111       strokeWeight(3) // set strokeWeight
112       fill('#E2C58F')// set color
113       ellipse(xi, y, 10) // draw left eye
114       xi = 172;
115       y = 137;
116       s = (mouseX - xi) / 30
117       q = (mouseY - y) / 30
118       xi = xi + s
119       ellipse(xx, yy, 10) // draw right eye
120       xx = 224;
121       yy = 137;
122       s2 = (mouseX - xx) / 30
123       q2 = (mouseY - yy) / 30
124       xx = xx + s2
125   }
126 }
```

- Line 104 create an if-else condition. If the mouse is pressed, will create
  - o Line 105 is the set stroke weight.
  - o Line 106 is set color.
  - o Lines 107 and 108 are draw left blackeye and right blackeye.
- Line 110 is else condition.
  - o Line 111 is the set stroke weight.
  - o Line 112 is set color.
  - o Lines 113 and 119 are draw left eye and right eye. By using mouseX and mouseY to receive value and replace in empty value.



While dragging the mouse.

## drawleftmoustache and drawrightmoustache function

```
127 function drawleftmoustache(){
128     //left moustache
129     strokeWeight(3) // set strokeWeight
130     line(120, 193, 52, 170)
131     line(120, 199, 50, 200)
132     line(120, 205, 60, 230)
133 }
134 function drawrightmoustache(){
135     //right moustache
136     strokeWeight(3) // set strokeWeight
137     line(280, 193, 353, 170)
138     line(280, 200, 358, 200)
139     line(280, 206, 352, 225)
140 }
```

- **For left moustache**
  - Line 129 is the set stroke weight.
  - Lines 130, 131, and 132 is draw lines.
- **For right moustache**
  - Line 136 is the set stroke weight.
  - Lines 137, 138, and 139 is draw lines.

