

for loop

```
int y = 40;
size(600, 360);
background(102);
noStroke();
// White bars
fill(255);
for(int i = 0; i < 5; i++) {
  rect(50, y, 500, 50);
  y+=60;
}
```

Other For Loop

```
int xLoc = 50;
size(480, 270);
background(255); // 0 = black 255 = white
stroke(0);
for(int i = 0; i < 20; i++) {
  line(xLoc, 50, 50, 100);
  xLoc += 20;
}
```

For loops:

Declare the variable in the () as in (int i = 0;.....)

It means: i = 0; as long as i is less than 20; then add 1 to i.

(the conditions are in the parenthesis)

{what happens during the loop is in the curly brackets}

Cool Patterns

```
void setup() {  
  size(640, 360);  
  background(102);  
}  
void draw() {  
  variableEllipse(mouseX, mouseY, pmouseX, pmouseY);  
} // remember I missed the pmouseX and the Y twice  
  
void variableEllipse(int x, int y, int px, int py) {  
  float speed = abs(x-px) + abs(y-py);  
  stroke(speed);  
  fill(random(255),random(255),random(255)); // ad this in last  
  ellipse(x, y, speed, speed);  
}
```

Draw Roses when Mouse Pressed

```
int angle = 0;
void setup() {
  size(640, 360);
  background(102);
  noStroke();
  fill(0, 102);
}

void draw() {
  // Draw only when mouse is pressed
  if (mousePressed == true) {
    angle += 5;
    float val = cos(radians(angle)) * 12.0;
    for (int a = 0; a < 360; a += 75) { // be careful it's += not =+
      float xoff = cos(radians(a)) * val;
      float yoff = sin(radians(a)) * val;
      fill(255,0,0);
      ellipse(mouseX + xoff, mouseY + yoff, val, val);
    }
    fill(0);
    ellipse(mouseX, mouseY, 5, 5);
  }
}
```

Mouse Pressed Draw Square

```
void setup() {  
  size(480, 270);  
  background(255);  
}  
void draw() {  
  // Nothing happens in draw() in this example!  
}  
  
void mousePressed() {  
  stroke(0);  
  fill(175);  
  rectMode(CENTER);  
  rect(mouseX, mouseY, 16, 16);  
}  
  
void keyPressed() {  
  background(255);  
}
```