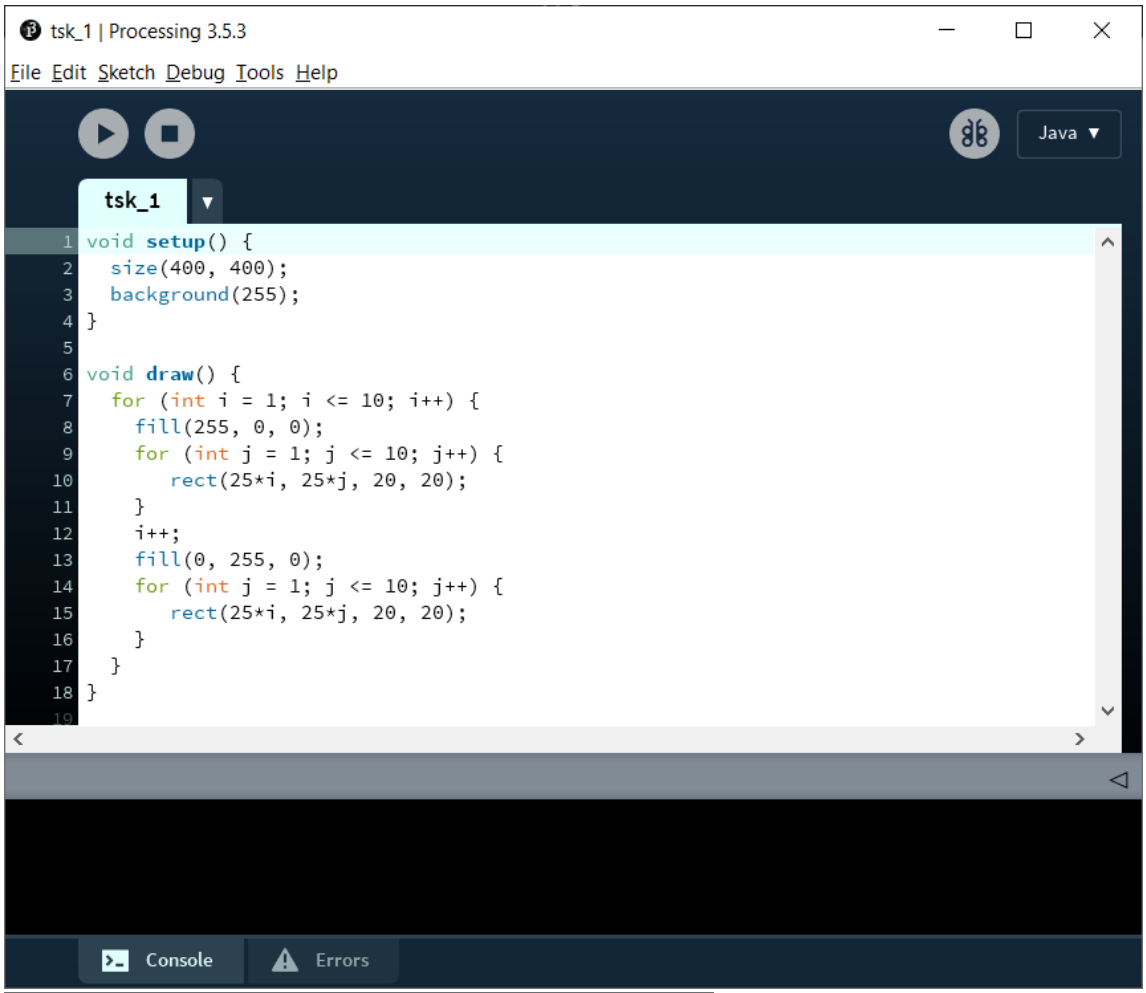
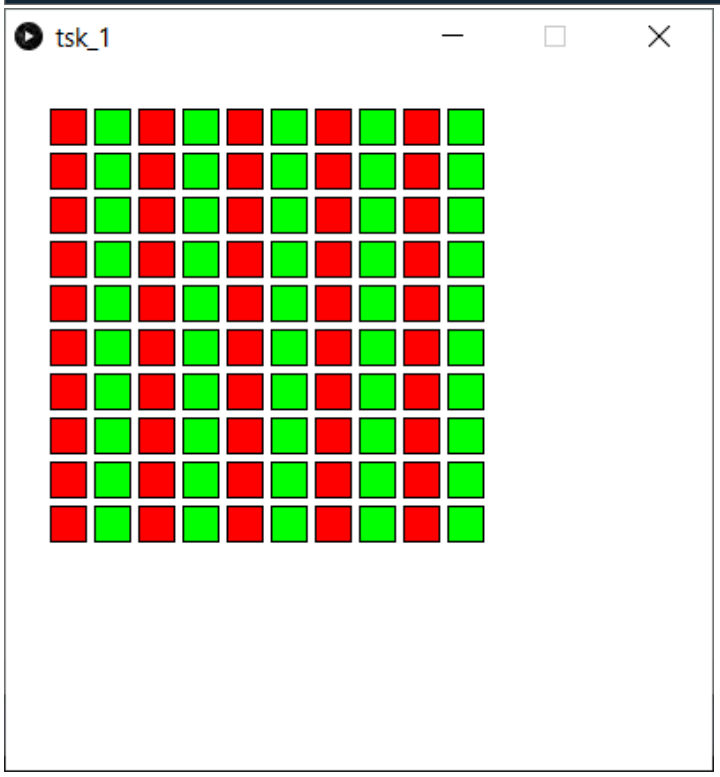
Lab 3

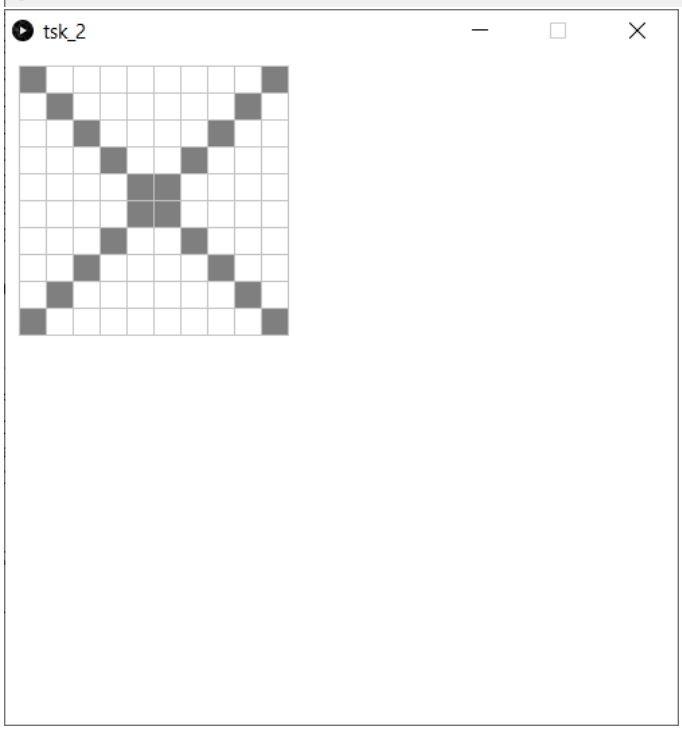
1.


tsk_1 | Processing 3.5.3
File Edit Sketch Debug Tools Help
Java
tsk_1
1 void setup() {
2 size(400, 400);
3 background(255);
4 }
5
6 void draw() {
7 for (int i = 1; i <= 10; i++) {
8 fill(255, 0, 0);
9 for (int j = 1; j <= 10; j++) {
10 rect(25*i, 25*j, 20, 20);
11 }
12 i++;
13 fill(0, 255, 0);
14 for (int j = 1; j <= 10; j++) {
15 rect(25*i, 25*j, 20, 20);
16 }
17 }
18 }
Console
Errors


tsk_1

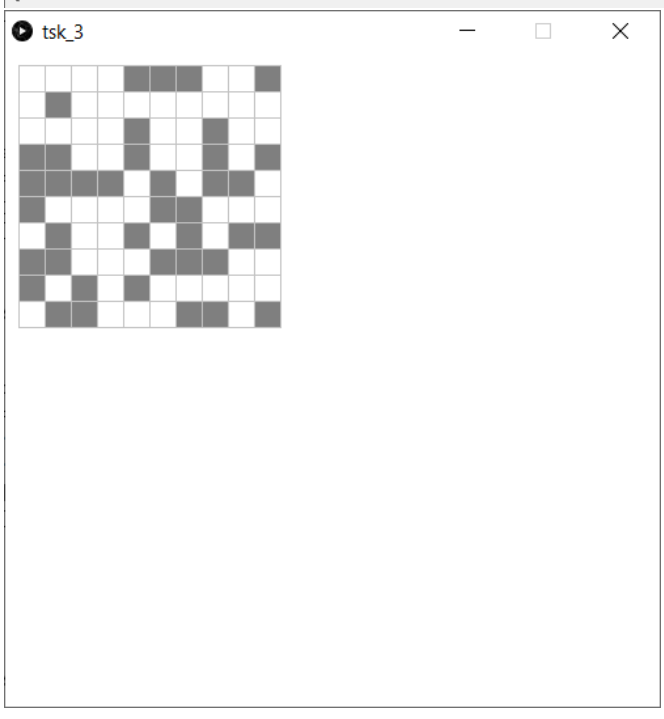
2.

```
void setup() {
 size(500, 500);
 background(255);
 stroke(195);
 int [][] myData ={
  {1,0,0,0,0,0,0,0,0,1},
  {0,1,0,0,0,0,0,0,1,0},
  {0,0,1,0,0,0,0,1,0,0},
  {0,0,0,1,0,0,1,0,0,0},
  {0,0,0,0,1,1,0,0,0,0},
  {0,0,0,0,1,1,0,0,0,0},
  {0,0,0,1,0,0,1,0,0,0},
  {0,0,1,0,0,0,0,1,0,0},
  {0,1,0,0,0,0,0,0,1,0},
  {1,0,0,0,0,0,0,0,0,1}
  };
  myDraw(myData);
}

void myDraw(int[][] array){
  for (int i = 0; i < 10; i++) {
    for (int j = 0; j < 10; j++) {
      if (array[j][i] == 1) {
        fill(127);
      }
      else {
        fill(255);
      }
      rect(10+20*i, 10+20*j, 20, 20);
    }
  }
}
```

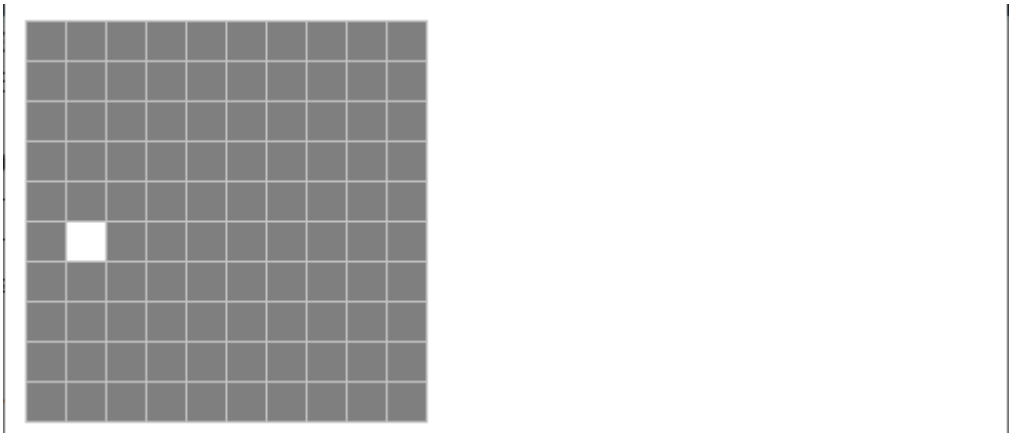


3.

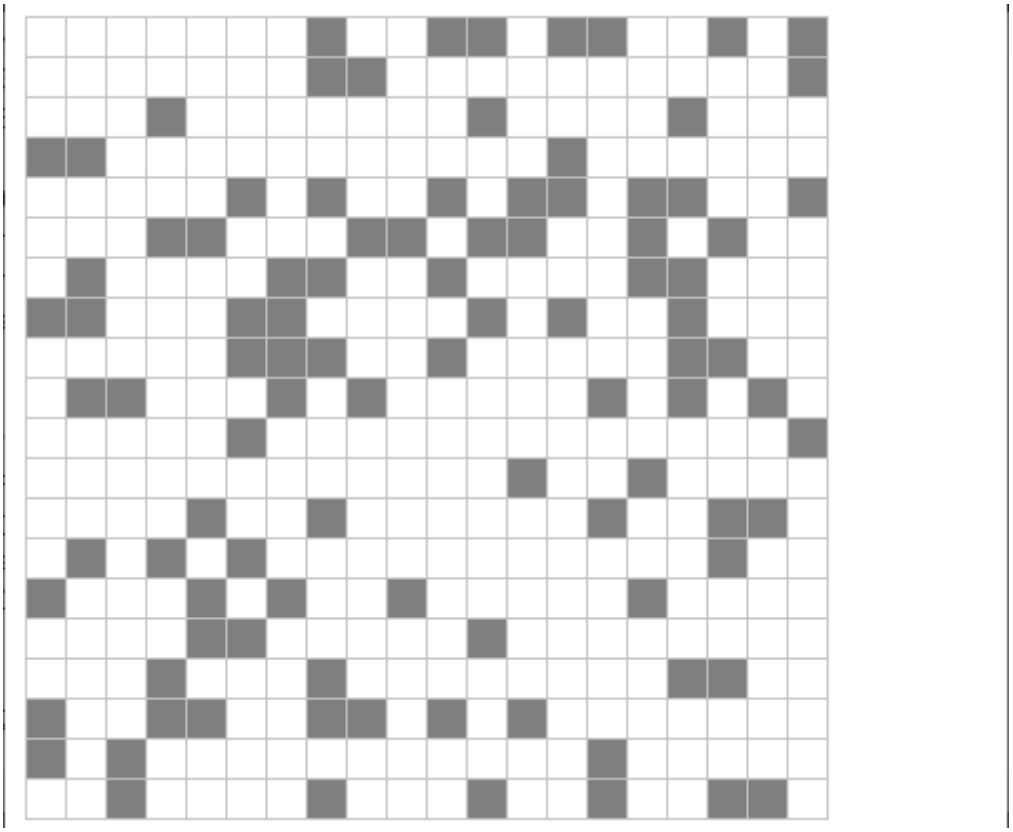
```
void setup() {
 size(500, 500);
 background(255);
 stroke(195);
 int[][] myData = new int[10][10];
 myClearData(myData);
 myRandomSet(myData, 40);
 myDraw(myData);
}

void myDraw(int[][] array){
  for (int i = 0; i < array.length; i++) {
    for (int j = 0; j < array.length; j++) {
      if (array[j][i] == 1) {
        fill(127);
      }
      else {
        fill(255);
      }
      rect(10+20*i, 10+20*j, 20, 20);
    }
  }
}

int[][] myClearData(int[][] array) {
  for (int i = 0; i < array.length; i++) {
    for (int j = 0; j < array.length; j++){
      array[i][j] = 0;
    }
  }
  return array;
}

int[][] myRandomSet(int[][] array, int count) {
  for (int i = 0; i < count && i < array.length*array.length; i++) {
    int x = int(random(array.length));
    int y = int(random(array.length));
    if (array[x][y] == 0) {
      array[x][y] = 1;
    }
    else {
     i--;
    }
  }
  return array;
}
```



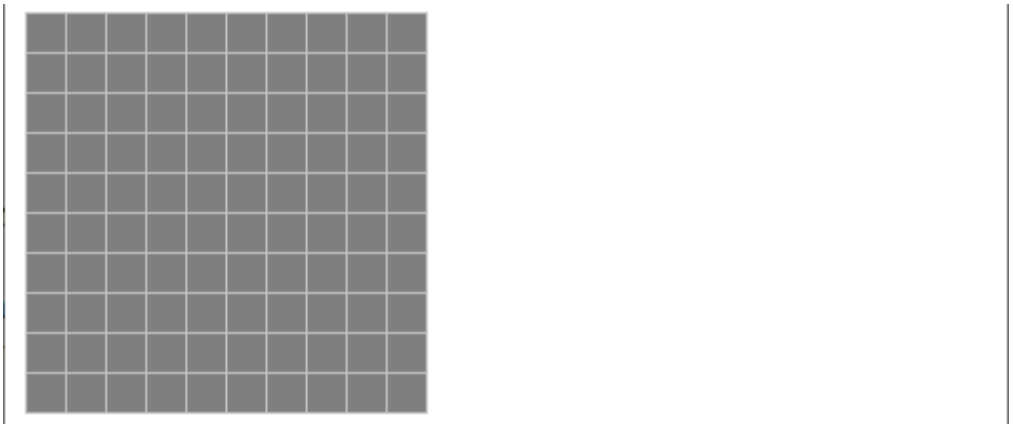
3.1.



3.2.



3.3.



4.

```
void setup() {
 size(1050, 1050);
 background(255);
 stroke(195);
 int[][] myData = new int[50][50];
 myClearData(myData);
 myRandomSet(myData, 1000);
 myDraw(myData);
}

void myDraw(int[][] array){
  for (int i = 0; i < array.length; i++) {
    for (int j = 0; j < array.length; j++) {
      if (array[j][i] == 1) {
        fill(127);
      }
      else {
        fill(255);
      }
      rect(10+20*i, 10+20*j, 20, 20);
    }
  }
}

int[][] myClearData(int[][] array) {
  for (int i = 0; i < array.length; i++) {
    for (int j = 0; j < array.length; j++){
      array[i][j] = 0;
    }
  }
  return array;
}

int[][] myRandomSet(int[][] array, int count) {
  for (int i = 0; i < count && i < array.length*array.length; i++) {
    int x = int(random(array.length));
    int y = int(random(array.length));
    if (array[x][y] == 0) {
      array[x][y] = 1;
    }
    else {
     i--;
    }
  }
  return array;
}
```