

COSC111 SP 2022. Final. Program to code **POINTS = 18/32****05/20/2022 (between 9:00 – 11:00 AM) during class. Open computer.***Festina lente. Make Haste Slowly.**Your name ...Pho Vu**Return this paper with your observations if any. Mark the points that you think you solved.*

Generate a matrix 3 x 3 with random integers in {0,1,2}. Then **print the matrix** and its **first diagonal**.

Each number {0,1,2} corresponds to a color in {red, green, blue}. For example, if the matrix holds 0 you will display a square colored in red. But first, **print the color names** that correspond with the integers on first diagonal and **check if they repeat**. Ask the user if the program should draw **3 equal squares (100 x 100)with the centers on the first diagonal** of your canvas (300 x 300) in the corresponding colors. If the diagonal is {1,0,0} the squares will be green, red and red, starting with the left upmost corner. See examples below.

Send in Moodle: program **[yourInitials]final111.java [points 13/18]** that:

- | | | |
|--|--------------|----------|
| 1. Generate the matrix[3][3] with random integers in {0,1,2} | [points: 2] | x |
| 2. Print matrix [3][3] | [points: 1] | x |
| 3. Display the first diagonal | [points: 2] | x |
| 4. Print the colors corresponding to the first diagonal | [points: 2] | x |
| 5. Check if the colors repeat or not | [points: 2] | x |
| 6. Ask user to draw the colored squares (y/n)?(Should also work for Y) | [points:1] | x |
| 7. Draw the canvas with 300 x 300 pixels | [points:1] | x |
| 8. Draw the grid with 3 squares with the colors on the diagonal | [points:2] | x |

How you submit [5/18 points]:

- | | | |
|---|------------|----------|
| (0- Program compiles | [points:1] | x |
| (1- send in time | [points:1] | |
| (2- send correctly (upload in Moodle final just the java file) | [points:1] | x |
| (3- has comments and keeps the format below from the examples | [points:1] | x |
| (4- write in your file on the first line: filename and your full name | [points:1] | x |

Ex: // File: **ALfinal111.java** @ Ada Lovelace

Example 1:

```
>java MMfinal111.java
```

```
1 1 1
```

```
1 0 1
```

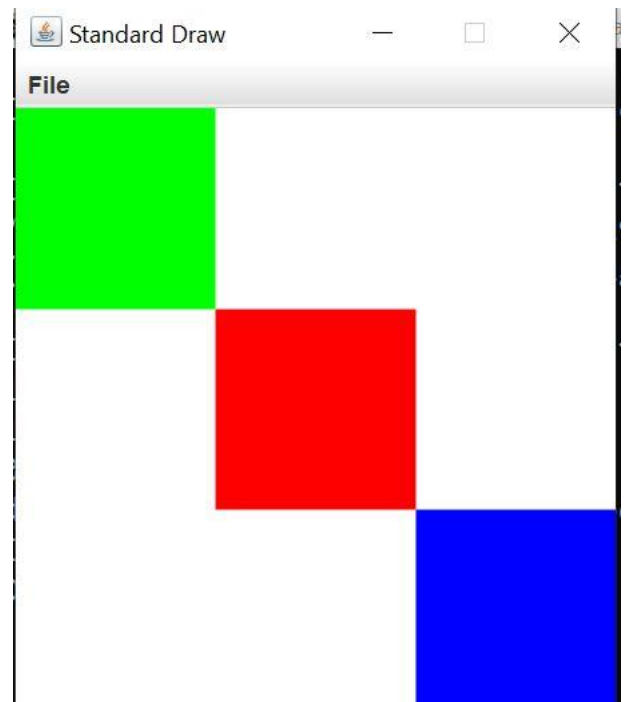
```
0 0 2
```

```
Diagonal: 1 0 2
```

```
Corresponding colors: green red blue
```

```
Colors repeat: false
```

```
Do you wish to draw(y/n)? y
```



Example 2:

```
>java MMfinal111.java
```

```
1 2 1
```

```
0 0 2
```

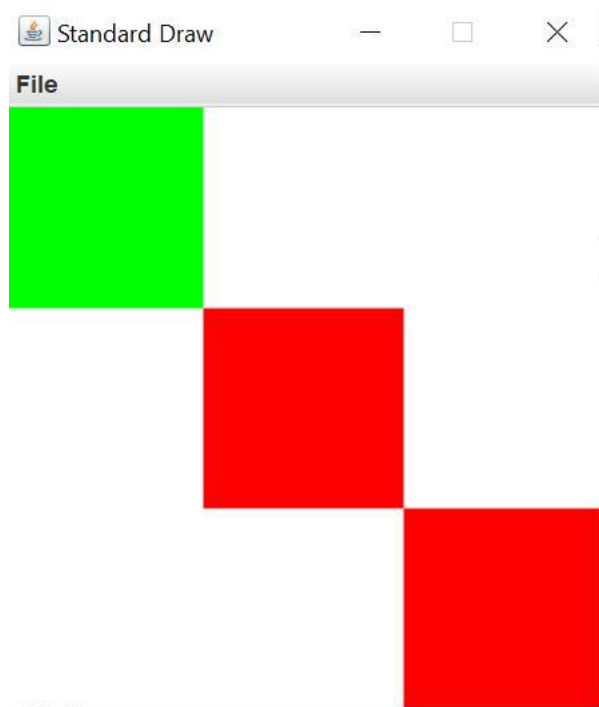
```
1 2 0
```

```
Diagonal: 1 0 0
```

```
Corresponding colors: green red red
```

```
Colors repeat: true
```

```
Do you wish to draw(y/n)? y
```

**Example 3:**

```
>java MMfinal111.java
```

```
1 2 1
```

```
0 0 2
```

```
1 2 1
```

```
Diagonal: 1 0 0
```

```
Corresponding colors: blue red blue
```

```
Colors repeat: true
```

```
Do you wish to draw(y/n)? n
```

```
Goodbye
```