

# CSCI 132:

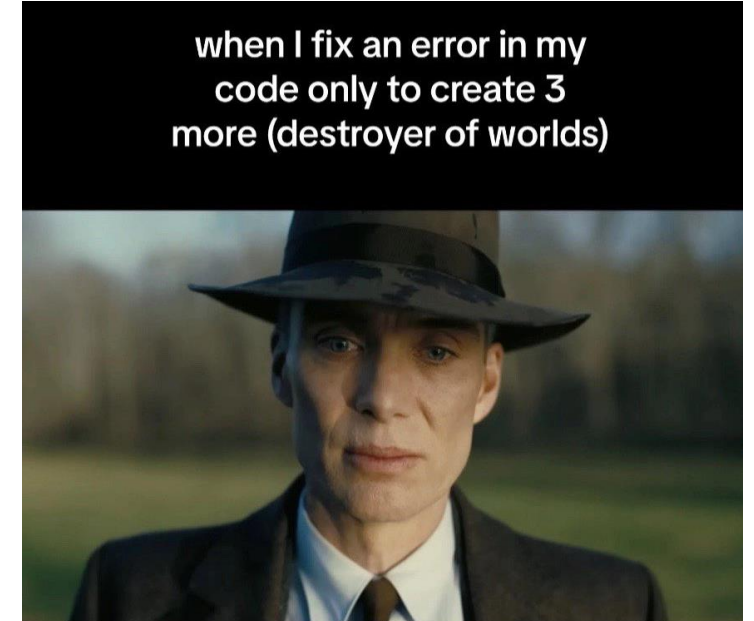
# Basic Data Structures and Algorithms

Lecture 6: More Java (while loops, practice)

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# Announcements

- Lab 2 due **tomorrow** @ 11:59 PM
- Program 1 is posted, due on September 18<sup>th</sup>  
I will talk about it and give some hints on Friday



**While loops** can be used to iterate if a condition is true.

```
int x = 100;
while(x > 0) {

    System.out.println(x);
    x--;

}
```

1. Check Condition
2. If condition is true, execute body of loop
3. Repeat

```
int x = 100;
while(x > 0) {

    System.out.println(x);
    x++;

}
```

You do have to worry about the possibility of infinite loops....

New

The **do/while** loop will always execute the body of the loop once, and then check the condition

```
int i = 0;
do {
    System.out.println(i);
    i++;
}
while (i < 5);
```

1. Execute body of loop
2. Check condition
3. Repeat

!!! You are guaranteed at least one execution of the loop body

## Practice

Write a Java program that will simulate dice being rolled. The Java program should keep track of the frequencies of how much each dice number was rolled (# of 1s rolled, # of 2s rolled, etc) and print it out to the screen like a Histogram

```
Enter # of times to roll dice:
```

```
20
```

```
Enter # of sides of dice:
```

```
6
```

```
0:
```

```
1: **
```

```
2: *****
```

```
3: ****
```

```
4: **
```

```
5: ****
```

```
6: ***
```