Why don’t we want to do this?

if (x > y) {
    System.out.println("X is greater than Y");
}  
else if (x < y) {
    System.out.println("X is less than Y");
}  
else if (x == y) {
    System.out.println("X is equal to Y");
}
Why don’t we want to do this?

```java
if(x > y) {
    System.out.println("X is greater than Y");
} else {
    if(x < y) {
        System.out.println("X is less than Y");
    } else {
        System.out.println("X is equal to Y");
    }
}
```

Common Error w/ If/Else...

```java
if(grade >= 90) {
    System.out.println("You get an A");
} else if(grade >= 80) {
    System.out.println("You get a B");
} else if(grade >= 70) {
    System.out.println("You get an C");
} else if(grade >= 60) {
    System.out.println("You get a D");
} else if(grade < 60) {
    System.out.println("You get a F");
}
```

Multiple Conditions

- What if we want to check if a grade is between two numbers, 93–100 for an A, 90–92 for an A–?
  ```java
  if(grade <= 100 && grade >= 93) {
      System.out.println("You get an A");
  } else if(grade < 93 && grade >= 90) {
      System.out.println("You get an A–");
  } else if(grade < 90 && grade >= 87) {
      System.out.println("You get a B+");
  } ...
  ```

- What if we want to check for an invalid grade, i.e. greater than 100 OR less than 0? If(grade
Multiple Conditions

- What if we want to check for an invalid grade, i.e. greater than 100 OR less than 0?

```java
if(grade > 100 || grade < 0) {
    System.out.println("Not a valid grade!!");
}
```