if/else
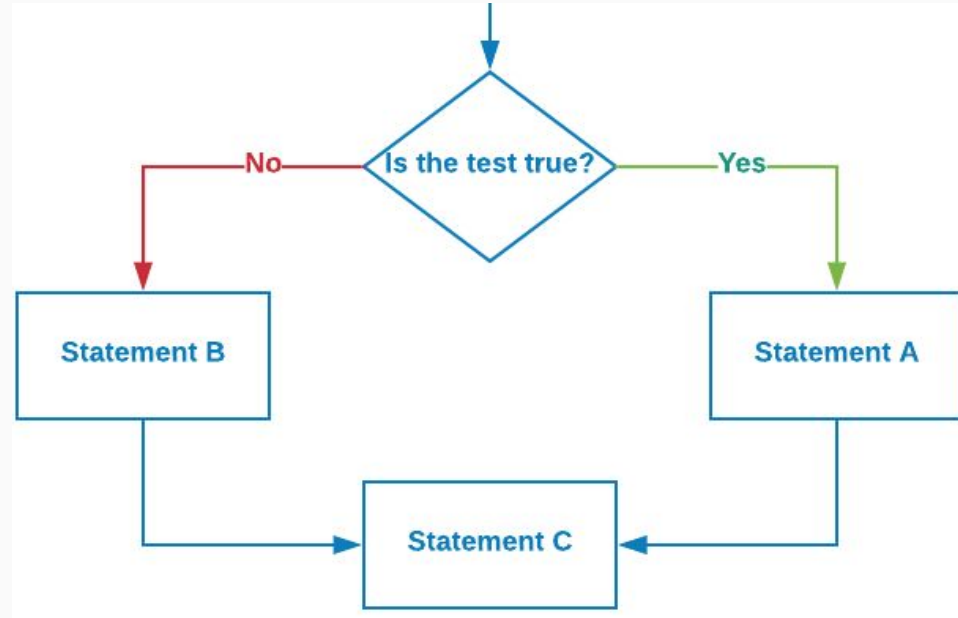
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Updated March 2019

Before We Begin

- Make sure you have Java & Java JDK downloaded on your computer
  - can run `java -version` in terminal to check
- Make sure you have IntelliJ downloaded on your computer

- *Suggested:* Watch previous Java tutorials

What is an if/else Statement?

An if/else statement is a chunk of code that executes one block if a test is true, another if false.

Code Diagram of if/else Statement

```
if (test) {
    // Statement A
} else {
    // Statement B
}

// Statement C
```

if/else Example

A method that prints "would round up" if a given non whole number would round up and prints "would round down" otherwise.

Cool Trick: Tertiary if Statements

Tertiary if statements are a way to set a value as if you were using an if else statement but they only take up one line.

Code Example:

```
int x = 4;
int y = x > 3 ? 2 : 14;
```
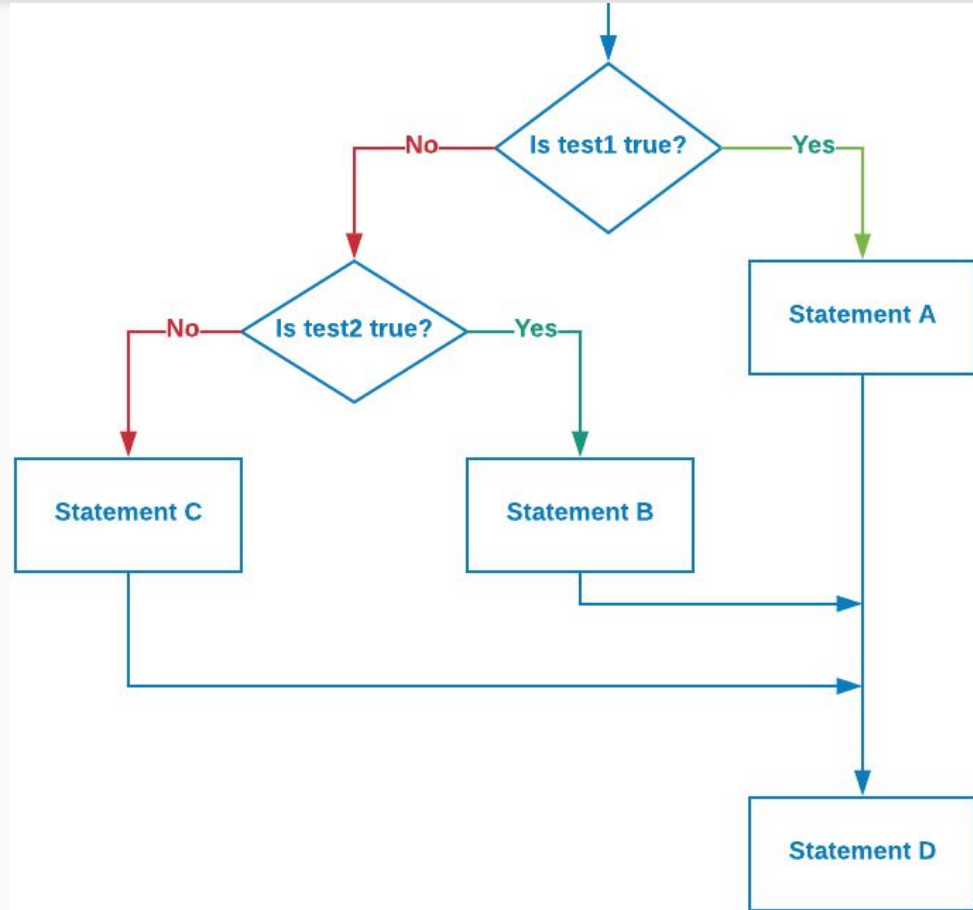
Code Explanation:
    If x is greater than 3 then y is set to 2, otherwise it is set to 14.

What is a Nested if/else Statement?

A nested if/else statement is a chunk of code that chooses between outcomes using many tests.

Code and Diagram of Nested if/else Statement

```
if (test1) {
    // Statement A
} else if (test2) {
    // Statement B
} else {
    // Statement C
}

// Statement D
```

Nested if/else Example

A method that takes in a whole number grade and returns the letter grade, as a single character, that goes with it. A negative grade would results in an 'I' for incomplete.

- ex: 87 would return an 'B'

The End