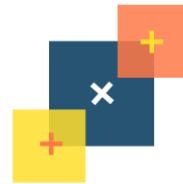


WEEK 3 COURSEPACK



TECH BHOI

JUL 13
JUL 17
2020



MON
JUL 13

DECISION MAKING

Most of our lives revolve around making a decision to do something, whether that be consciously or subconsciously. Whenever we code, we usually do so to solve a problem or to make decisions what to do whenever we have a condition imposed by some situation.

This class is the first time we put a label on much of the work that a programmer does, DECISION MAKING. As we have seen before, we can make decisions of what data type is best to use, or what variables to use in an output. We will now formalize this process by calling it Decision making.

PROBLEM SOLVING

Say you ask to borrow a friends phone, and you accidentally drop it and the screen cracks. HOW SAD!!

Now you have to replace ur friends phone, but say you only have 400\$ in your account.

We need to decide now what phone we are going to get him. It would be nice to get him an iphone (like they had), but we also have the possibility of getting him an android phone.

Assessing the situation, we can safely say that we will buy the Iphone if it is less than 400\$, otherwise we will get the android.

We can model our problem as follows:

if the price of the phone is less than 400\$, we will buy the iphone.

Otherwise(else)

we will buy the android

**MON
JUL 13**

INDENTATION

What are some websites that you have visited before that use indentation when outputting information? Have you ever visited some chat form websites like reddit or the YouTube comment section?

Another great example of seeing the use of indentation, is on facebook comment threads, it is easy to see who replied to who and follow the conversation.

Why do we use indentation?

The reason we use indentation is to identify what is happening across multiple lines of code. Code that is indented the same is called a block code .

In the code above, we can see that each possibility will output something different (see how the indentation of each output falls under a condition)

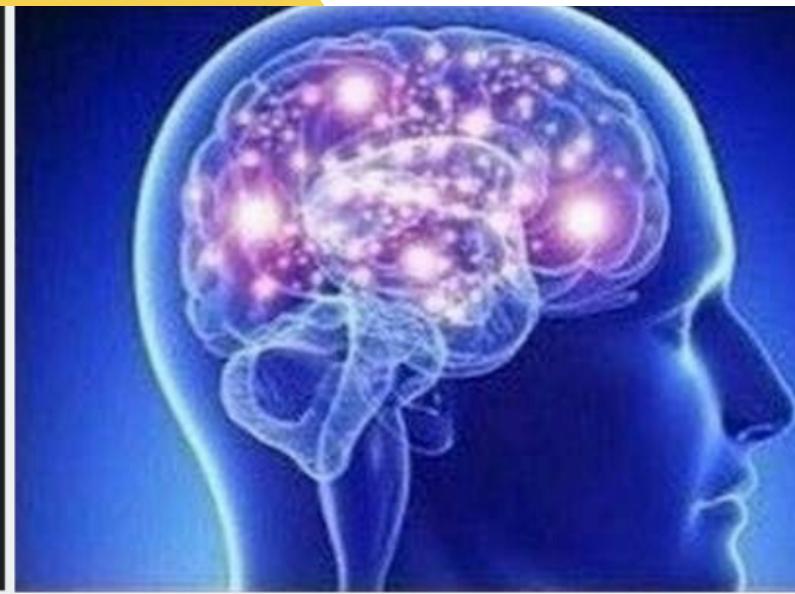
Using indentation is important to understand what is following a condition

If we don't indent properly we will get errors in our code....

Quiz Answer : C

```
int i = 0;

while (i<100) {
    Console.WriteLine(i);
    i++;
}
```



TUE JUL 14

COMPARATORS

Common Comparator Ops:

Exactly Equal (==):

`3 == int("3") : True`

Greater than (>):

`4 > 3 : True`

Less than (<):

`3 < 4 : True`

Mixed Comparator Ops:

NOT equal to (!=):

`4 != 3 = True`

Greater than or equal to (>=):

`4 >= 3 = True`

`4 >= 4 = True`

Less than or equal to (<=):

`3 <= 4 : True`

`3 <= 3 : True`

Calculating remainder of division

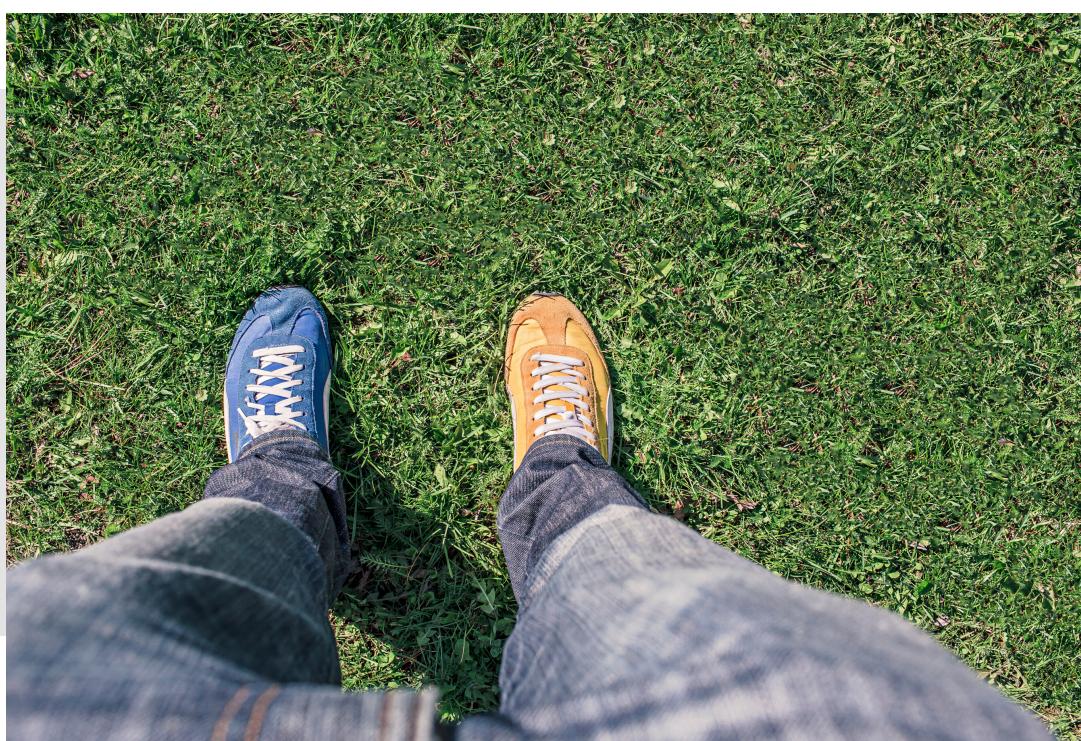
In programming, often times we need to compare data with each other in order to make a decision on what to do next. A real world example of this is say we are putting on socks in the morning, we reach into our sock drawer and grab any two socks. In order for us to not look like rushed out of the house, we need to compare the two socks and see if they are the same. If they are the same, then we will put on both socks, otherwise we will keep searching until we find the matching sock, to make a complete pair.

When comparing, oftentimes we will be comparing the value stored inside of a variable. We can compare variable to variable, or variable to any data type directly.

REMEMBER:

Exactly equal (== double equals) is a comparison operator, whereas (= single equals) is used when storing a value inside a variable.

ALL COMPARATORS RESULT IN BOOLEAN





**WED
JUL 15**

FULL MULTIPLE CONDITIONS

WHAT ARE MULTIPLE CONDITIONS

A realworld example of fulfilling multiple conditions, if like when you have more than one condition that needs to be satisfied before doing a certain action. Say you arent allowed to go to the party friday night unless you finish your homework and did all your chores for the week. Can you think of an example?

BOOLEAN LOGIC

When you have the **AND** keyword between two conditions, both of them have to be satisfied, thus they both must be true.

When you have the **OR** keyword between two conditions, one of them have to be satisfied, thus at least one must be true.

QUIZ ANSWERS

1. c) 2. b)