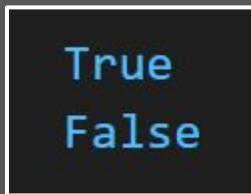


Booleans

Boolean Literals

Booleans are values that represent the validity of a statement.

Statements are either True or False.





Variable Example 1

```
bool1 = True  
bool2 = False  
bool1 = False
```



Pay attention
to the syntax

Memory

bool1

False

bool2

False

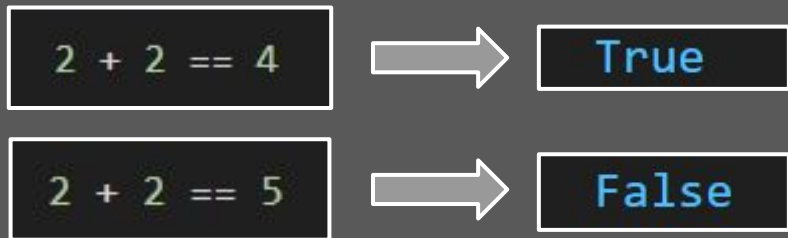
This example allocates memory with two different values saved at two different *addresses*.

It then re-assigns one of the *addresses* to a new value.

Conditional Statements

A statement can either be True or False. For example is $2 + 2$ equivalent to 4? How about 5?

In code we use conditional operators to make these statements.



Math Conditional Operators

- $s1 == s2$ is $s1$ equivalent to $s2$?
- $s1 != s2$ is $s1$ not equivalent to $s2$?
- $s1 < s2$ is $s1$ less than $s2$?
- $s1 > s2$ $s1$ greater than $s2$?
- $s1 <= s2$ $s1$ less than or equal to $s2$?
- $s1 >= s2$ $s1$ greater than or equal to $s2$?

What's important here is the syntax, the symbols and meaning are the same as in math.



Variable Example 2

Memory

bool1

False

bool2

True

```
bool1 = 4 == 4  
bool2 = 4 >= 4  
bool1 = 4 < 4
```



Pay attention
to the syntax

Here the focus is on the usage of
conditional statements and having their
values assigned to variables.