skillcrush

COMPARISON AND BOOLEAN OPERATORS

cheatsheet

In this cheatsheet, you'll find examples of comparison operators and boolean operators you'll use in your code. Print out this handy sheet to refer to whenever you need to add these operators to your code!

COMPARISON OPERATORS

Comparison operators are symbols used to compare two or more values.

<

Tests whether the value is less than another value.

```
1  distance_miles = 1

2  if distance_miles < 2:

3    print("This destination is close to your home.")

4  #Prints "This destination is close to your home." when the distance is
   less than 2 miles from home.
```

>

Tests whether the value is greater than another value.

```
1  age = 17

2  if age > 17:

3    print("You may vote in the election.")

4  #Prints "You may vote in the election." if the age is greater than 17.
```

==

Tests whether the value is equal to another value.

Notice there are two equal signs (==) instead of one. A single equal sign is reserved for assigning value, like assigning a value to a variable: `moon_landing = 1969`.

```
1  raining = "yes"

2  if raining == "yes":

3    print("You'll need your umbrella today.")

4  #Prints "You'll need your umbrella today." when the raining variable
   is equal to "yes".
```

<=

Tests whether the value is less than or equal to another value.

```
temperature_fahrenheit = 30

if temperature_fahrenheit <= 50:

  print("Don't forget to wear a jacket outdoors!")

#Prints "Don't forget to wear a jacket outdoors!" when the temperature is less than or equal to 50.
```

>=

Tests whether the value is greater than or equal to another value.

```
tomatoes = 15

if tomatoes >= 10:

  print("Let's make tomato sauce!")

#Prints "Let's make tomato sauce!" if you have greater than or equal to 10 tomatoes.
```

!=

Tests whether the value is **not** equal to another value.

```
restaurant = "dirty"

if restaurant != "clean":

  print("We should find a new restaurant.")

#Prints "We should find a new restaurant." when the restaurant variable does not equal "clean".
```

BOOLEAN OPERATORS

Boolean operators are keywords that test whether conditions are true or false.

and

Tests whether *all* conditions are true or false.

```
1  comfy = True

2  low_cost = True

3  if comfy and low_cost:

4    print("This is a good hotel.")

5  #Prints "This is a good hotel." when both the comfy and low_cost
   variables are True.
```

or

Tests whether *one* condition is true or false.

```
1  sales_month1 = 2000

2  sales_month2 = 3000

3  if sales_month1 or sales_month2 == 3000:

4    print("We met our sales goal!")

5  #Prints "We met our sales goal!" when the values for sales_month1 or
   sales_month2 equals 3000.
```

not

Tests whether *one* condition is false.

```
dinner_ready = True

if not dinner_ready:
  print("Dinner isn’t ready yet.")
else:
  print("It’s dinner time!")

#Prints "It’s dinner time!" when the dinner_ready variable is True. If the variable was False, "Dinner isn’t ready yet" would’ve printed.
```