!=

Example code:

```
print(3 != 4)
print("apple" != "Apple")
print(2 + 2 != 4)
```

*

Example code:

```
print(3 * 4)
print("apple" * 5)
```

**

Example code:

```
print(2 ** 3)
print(3 ** 4)
```

*=

Example code:

```
price = 100

#Add 15% sales tax
price *= 1.15
print(price)
```

+

Example code:

```
print(2 + 2)
print("apple" + " pie")
```

+=

Example code:

```
total = 0
for i in range(10):
  total += 10
  print(total)
```

-

Example code:

```
print(10 - 3)
print(3 - 10)

answer = 25 - 17
print(answer)
```

-=

Example code:

```
pocket_money = 40
while pocket_money > 0:
  pocket_money -= 10 #Subtract 10
  print("You have \${:.2f} left".format(pocket_money))
```

/

Example code:

```
print(10 / 3)
print(8 / 2)

answer = 25 / 5
print(answer)
```

/=

Example code:

```
price = 100

#Divide by 2 and store back in price variable
price /= 2
print(price)
```

<

Example code:

```
print(3 < 4)
print(4 < 3)

#Can be used on strings too, alphabetically
print("apple" < "banana")
```

<=

Example code:

```
print(3 <= 4)
print(3 <= 3)
print(9 <= 8)
```

==

Example code:

```
print(6 == 6)
print(2 + 2 == 5)
print("apple" == "apple")
print("code avengers" == "Code Avengers")

password = "hovercraft"
guess = input("Enter password: ")
if guess == password:
  print("Correct")
else:
  print("Incorrect")
```

>

Example code:

```
print(6 > 7)
print(7 > 6)

#Can be used on strings too, alphabetically
print("apple" > "banana")
```

>=

Example code:

```
print(4 >= 4)
print(5 >= 4)
print(8 >= 9)
```

\n

Example code:

and

Example code:

```
#x is True because both Boolean expressions are True
x = 3 < 4 and 5 > 2
print(x)

#y is False because 9 < 4 is False, so both parts are NOT True.
y = 2 < 9 and 9 < 4
print(y)
```

break

Example code:

```
#This loop ends after 8 is printed
for i in range(5, 15):
  print(i)
  if i == 8:
    break
```

continue

Example code:

```
#This loop skips printing 3
for i in range(12):
  if i == 3:
    continue
  print(i)
```

elif

Example code:

```
age = int(input("How old are you?"))

if age <= 12:
  print("You are a child")
elif age > 12 and age < 20:
  print("You are a teen")
elif age < 0 or age > 125:
  print("Invalid age")
else:
  print("You are an adult")
```

else

Example code:

```
age = int(input("How old are you?"))

if age <= 12:
  print("You are a child")
elif age > 12 and age < 20:
  print("You are a teen")
elif age < 0 or age > 125:
  print("Invalid age")
else:
  print("You are an adult")
```

for

Example code:

```
#for loop syntax: for i in range(start, stop, step)
#   this will start at the start value, stop one before the
stop value, and count up or down in the step value.

#This loop prints the numbers 0 - 2
for i in range(3):
  print(i)

#Prints "Hello" 5 times
for i in range(5):
  print("Hello")

#Prints the numbers 1 - 7 (stops one short of end value)
for i in range(1, 8):
  print(i)

#Prints each letter separately
for letter in "Python is cool!":
  print(letter)
```

if

Example code:

```
age = int(input("How old are you?"))

if age <= 12:
  print("You are a child")
elif age > 12 and age < 20:
  print("You are a teen")
elif age < 0 or age > 125:
  print("Invalid age")
else:
  print("You are an adult")
```

in

Example code:

```
#Checks if the letter A is in the word entered by the user
word = input("Enter a word: ").strip().lower()

if "a" in word:
  print("There is an a!")

#Loops for each number in the range
for i in range(0, 11):
  print(i)

#Loops for each word in the list
for color in ["red","green","blue"]:
  print(color)

#Checks if the user's input is in the list
day = input("Enter a weekday: ")

if day in ["monday","tuesday", "wednesday", "thursday",
"friday"]:
  print("Yes, that is a weekday!")
else:
  print("No that's not a weekday!")
```

input

Example code:

```
#Stores the user's input as a string inside the 'name' variable
name = input("What is your name?")

#If we want to store input as an integer, we need to use int()
(or float() for a decimal)
age = int(input("How old are you?"))
```

None

Example code:

```
name = None
print(name)
```

not

Example code:

```
# x is False because 3 < 4 is True, and 'not' switches it
x = not 3 < 4
print(x)

# Checks if the letter "e" is NOT in the user's input
word = input("Enter a word: ").strip().lower()

if not "e" in word:
  print("There's no 'e' in that word")
else:
  print("There is an 'e'!")
```

or

Example code:

```
#x is False because both parts of the Boolean expression are
False
x = 3 > 4 and 5 < 2
print(x)

#y is True because 9 < 4 is False, but 2 < 9 is True. Only one
True statement is needed with 'or'
y = 2 < 9 and 9 < 4
print(y)
```

print

Example code:

```
#Print a string:
print("Hello, world!")

#Print a number:
print(9)

#Print a variable:
x = "apple"
print(x)

#Print a calculation:
print(3 * 7)

#Print a Boolean expression
print(3 > 7 or 3 < 4)
```

random

Example code:

```
#To import the random module:
import random

#Generate a random number from 1 to 10 with it
number = random.randrange(1, 11)
print(number)
```

try/except

Example code:

```
#Forcing the user to enter a valid number
while True:
  try:
    number = float(input("Enter your height in metres: "))
    break
  except ValueError:
    print("That is not a valid number, please enter your height
in metres e.g. 1.5")
```

while

Example code:

```
#Example 1
password = "Ni!"

guess = input("Guess the password: ")
while guess != password:
  print("Wrong!")
  guess = input("Guess the password: ")

print("Correct!")

#Example 2
total = 0

while total < 100:
  number = int(input("Enter a number to add: "))
  total += number
  print("Current total: {}".format(total))

print("Total has gone over 100!")
```