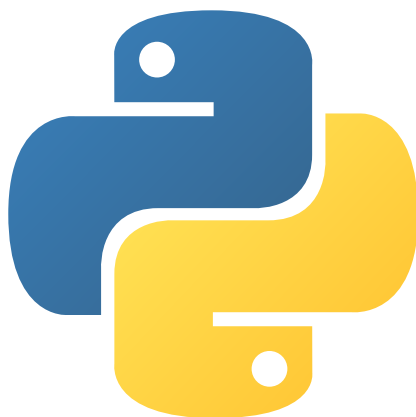


# Crash Course



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# Intro

Python is a popular programming language. It was created by Guido van Rossum, and released in 1991.

It is used for: web development (server-side), software development, mathematics, system scripting.

Python can be used on a server to create web applications.

Python can be used alongside software to create workflows.

Python can connect to database systems. It can also read and modify files.

Python can be used to handle big data and perform complex mathematics.

Python can be used for rapid prototyping, or for production-ready software development.

# Variables

Text Type: str

Numeric Types :int, float, complex

Sequence Types:list, tuple, range

Mapping Type:dict Set Types:set, frozenset

Boolean Type:bool

Binary Types: bytes, bytearray, memoryview

```
x = 5
y = "John"
print(x)
print(y)
```

**NB: The indentation in Python is fundamental!  
A wrong use causes errors!**

# Tuple

```
thistuple ("apple", "banana", "cherry", "orange", "kiwi")  
print(thistuple[2:4])
```

# List

```
thislist = ["apple", "banana", "cherry", "orange", "kiwi"]  
print(thislist[2:5])
```

# Set

```
thisset = {"apple", "banana", "cherry"}  
for x in thisset: print(x)
```

List and Tuple objects are sequences. A dictionary is a hash table of key-value pairs. List and tuple is an ordered collection of items. Dictionary is unordered collection. List and dictionary objects are mutable i.e. it is possible to add new item or delete and item from it. Tuple is an immutable object. Addition or deletion operations are not possible on tuple object. Each of them is a collection of comma-separated items. List items are enclosed in square brackets [], tuple items in round brackets or parentheses (), and dictionary items in curly brackets {}

# if else

```
if b > a:  
    print("b is greater than a")  
elif a == b:  
    print("a and b are equal")  
else:  
    print("a is greater than b")
```

# Loops

## for

```
fruits = ["apple", "banana", "cherry"]  
for x in fruits:  
    print(x)
```

## while

```
while i < 6:  
    print(i)  
    i += 1
```

## while continue

```
while i < 6:  
    i += 1  
    if i == 3:  
        continue  
    print(i)
```

# Functions

## Example

```
def my_function(fname, lname):  
    print(fname + " " + lname)  
my_function("Emil", "Refsnes")
```

# Classes/Objects

## Example

```
class Person:
    def __init__(self, fname, lname):
        self.firstname = fname
        self.lastname = lname
    def printname(self):
        print(self.firstname, self.lastname)
#Use the Person class to create
# an object, and then execute
# the printname method:
x = Person("John", "Doe")
x.printname()
```



# Try... except...

## Example

```
try:  
    print(x)  
except:  
    print("An exception occurred")
```

# Set Up

## PyCharm

If you want to get started with Python I personally suggest to install PyCharm an integrated environment for Python

**Thank you!**

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