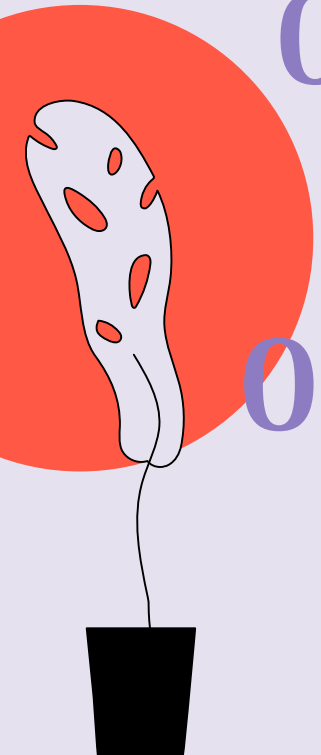
Introduction to Medical Informatics

Introduction to Python

Contents of Lecture



01

Introduction to Python

- A high-level programming language
- Open source
- Dynamic typed
- Easy to learn, yet powerful
- Support OOP
- Most popular for Data Analytics

Where Python is used?

01. Data Analysis.

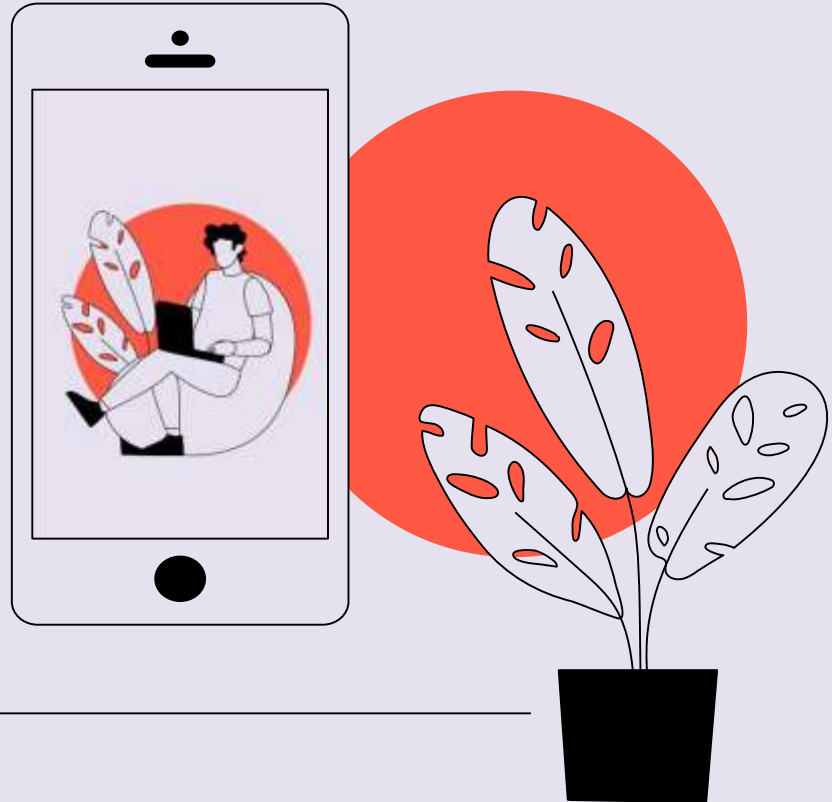
02. Mobile Apps

03. Desktop Apps

04. Testing

05. Web Apps

06. Hacking

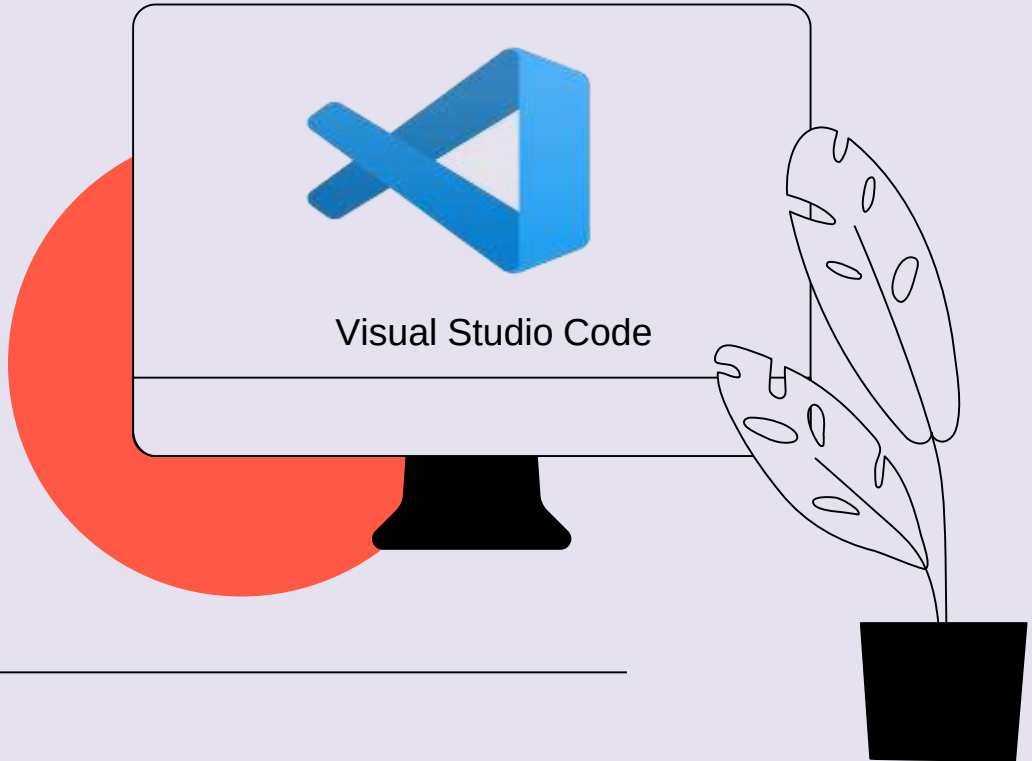


02

Install Python

Desktop software

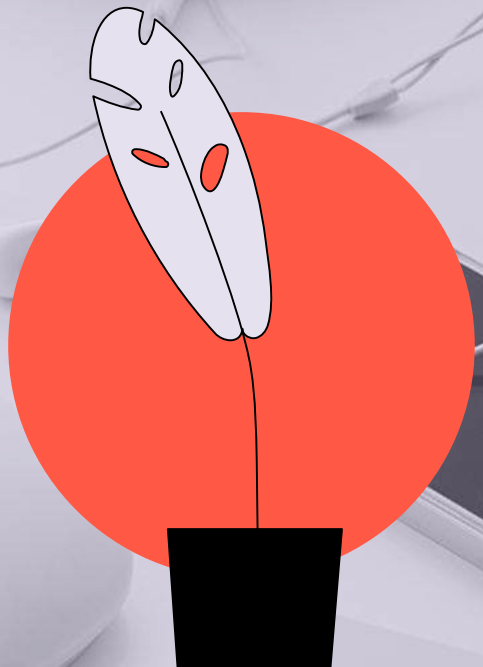
To Write and Execute any code in Python we use visual studio code



NOTE: Every one MUST install this program

03

Data Types

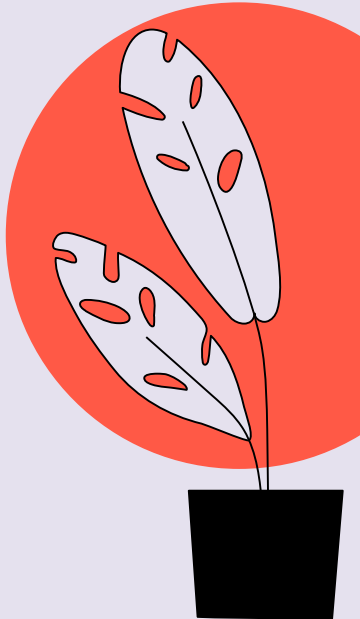


Common Data Types

Integers (int)

String (str)

Floats



- **Integers**

  Default for numbers

  For example: x = 8

- **String (str)**

  Used for words

  Can use " " or ' '
  For example: x = "Hello" or 'Hello'

- **Float**

  used for numbers with decimal

  For example: x = 8.4

- **List**

  used for collection of data

  For example: x = [8 , “World” , 10.5]

04

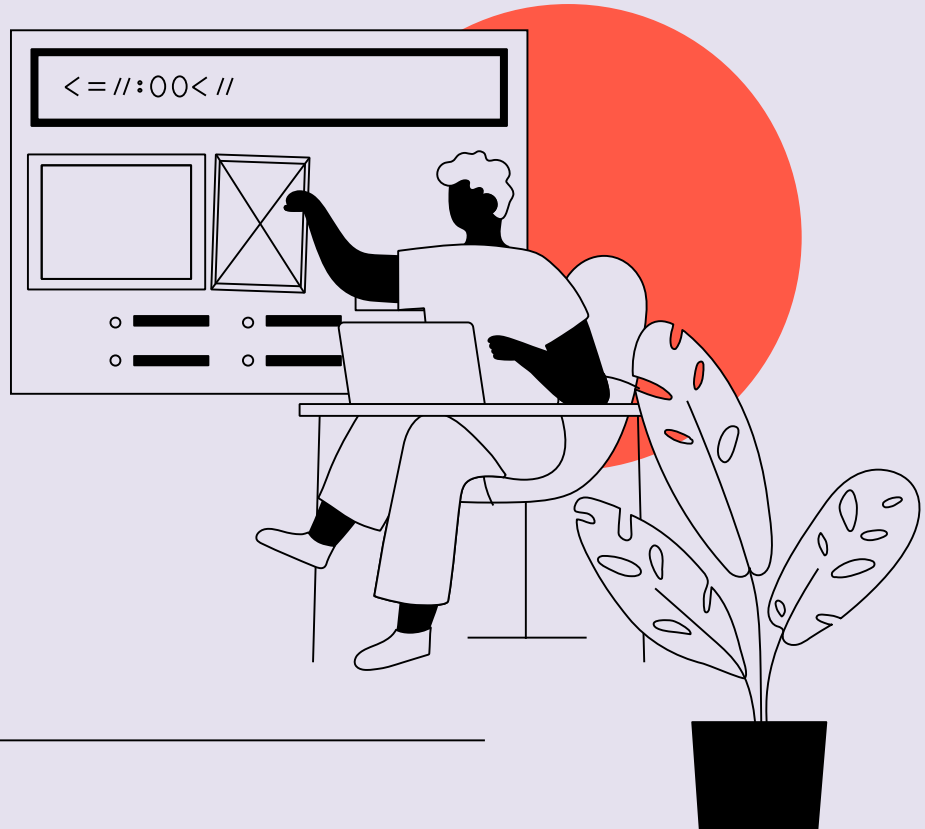
Python Syntax and Variables

Python Syntax

Print (“ Hello, world”)

x
y
z
any character

Variables



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

Out

5
John

- ```
  x =9
  x ="Ronald"
  print(x)
  ```

Out

Ronald

```
x =9.2
y ="ali"
print(type(x))
print(type(y))
```

Out

float

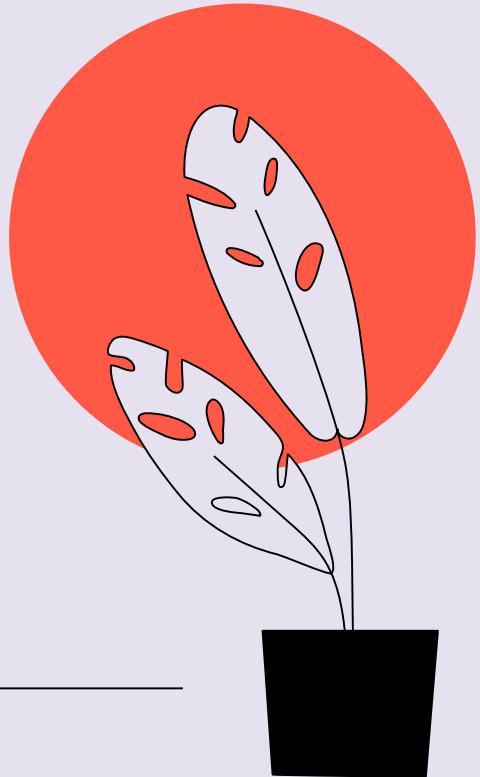
str

- ```
  a =4
  A ="Sally”
  print(y)
  print(y)
  ```

Out

4

sally


  ```

```
x, y, z = "Orange", "Banana", "Cherry"
print(x)
print(y)
print(z)
```

Out

orange

Banana

Cherry

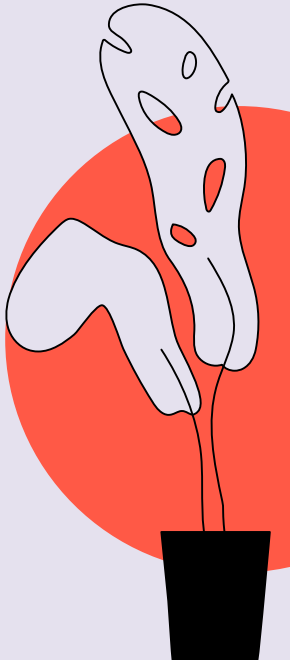
```
x = y = z = "Orange"
print(x)
print(y)
print(z)
```

Out

orange

orange

orange



```
fruits = ["apple", "banana", "cherry"]
x, y, z = fruits
print(x)
print(y)
print(z)
```

Out

apple

banana

Cherry

```
x = "Python is awesome"
print(x)
```

Out

Python is awesome

```
x = "Python"
y = "is"
z = "awesome"
print(x, y, z)
```

Out

Python is awesome

Thanks!

Do you have any questions?