

Everything is an Object

Python treats every value or data item with whether numeric, string or other type as an object in the sense that it can be assigned to some variable or can be passed to a function as an argument.

Every object in python is assigned a unique identity (ID) which remains the same for the lifetime of that object.

This ID is akin to the memory address of the object.

The function `id()` returns the identity of an object.

```
num1 = 20
```

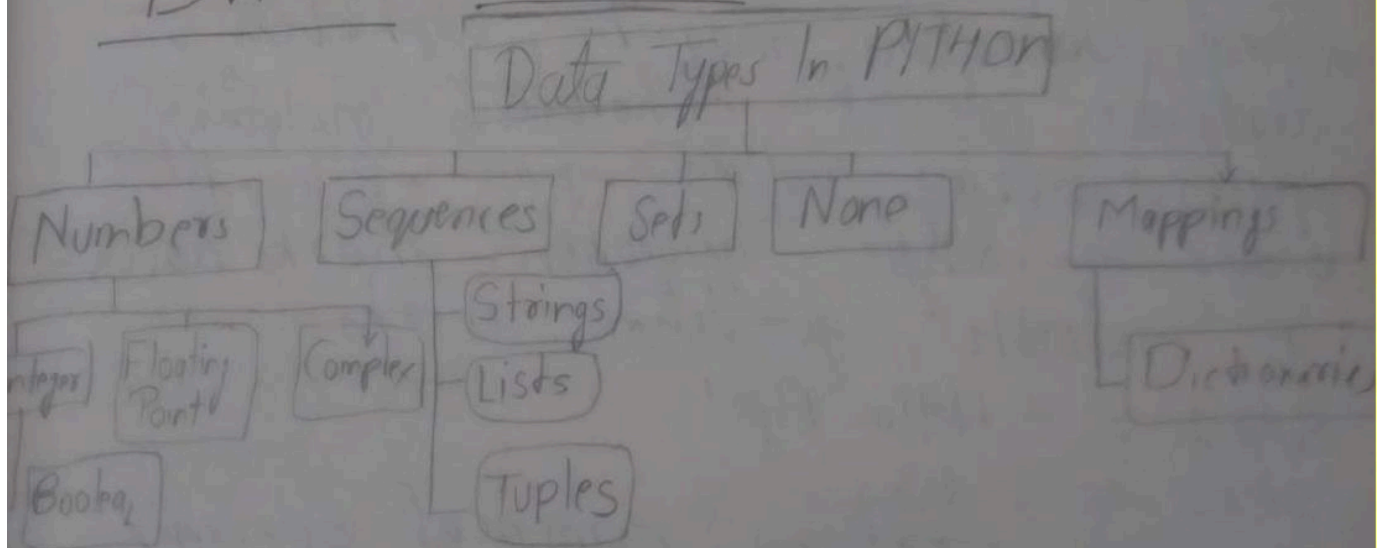
```
id(num1)
```

```
num2 = 30 - 10
```

```
id(num2)
```

OOP [Object Oriented Programming]
In the context of [OOP] Objects are a representation of the real world such as employee, student, vehicle, box, book, etc. In any object oriented programming language like C++, Java etc. each object has two things associated with it: (i) data or attribute and (ii) behaviour or methods. Further there are concepts of class and class hierarchies from which objects can be instantiated.

DATA TYPES



Number:

Number data types stores numerical values only. It is ~~not~~ further classified into three ~~more~~ different types: int, float and complex.

Type/Class	Description
int	Integer Number
float	real or floating point
complex	complex

Boolean data type (bool) is a subtype of integer. It is a unique datatype, consisting of two constants, True and False.

Boolean True value is non-zero, non-null and non-empty. Boolean False is the value zero.

String String is a group of characters. These characters may be alphabets, digits or special characters including spaces. String values are enclosed either in single quotation marks or in double quotation marks.

str1 = 'Hello Ap'

str2 = '436'

we can't perform numerical operations on strings even when the strings contain a numeric value as in str2.

List

List is a sequence of items separated by commas and the items are enclosed in square brackets [].