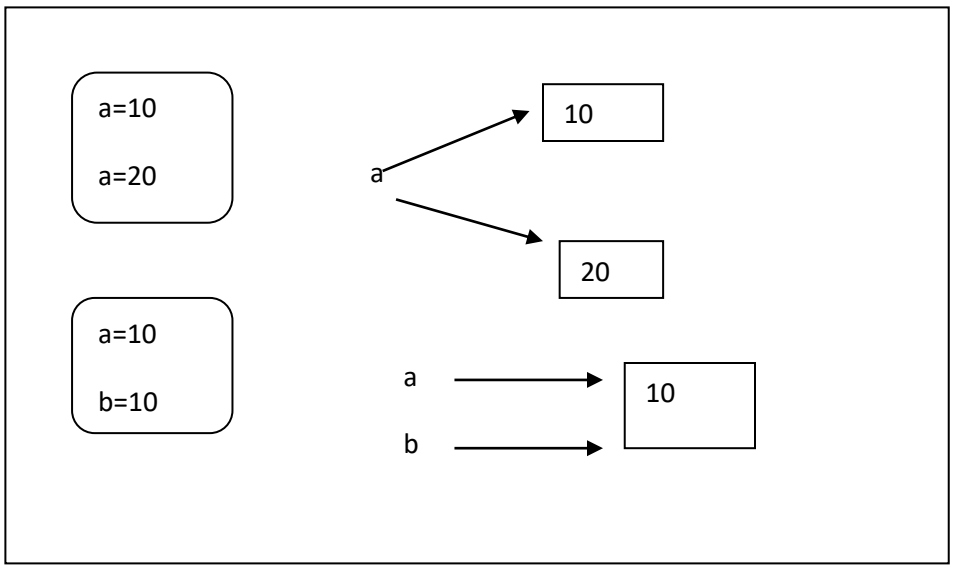
DataTypes

Data Type represent the type of data present inside a variable.

In Python we are not required to specify the type explicitly. Based on value provided,the type will be assigned automatically.Hence Python is Dynamically Typed Language.

Python contains the following inbuilt data types

1. int
2. float
3.complex
4.bool
5.str
6.bytes
7.bytearray
8.range
9.list
10.tuple
11.set
12.frozenset
13.dict
14.None



Note: Python contains several inbuilt functions

1.type():
to check the type of variable
2. id():
to get address of object

3. print()
to print the value
In Python everything is object

int data type:

We can use int data type to represent whole numbers (integral values)
Eg:
```
a=10
type(a) #int
```

Note:
In Python2 we have long data type to represent very large integral values. But in Python3 there is no long type explicitly and we can represent long values also by using int type only.

What is variables In Python:

Python Variable is containers that store values
Python is Dynamically Typed Language we not to need to declare variables typed
Ex:
```
S=”sumayya”
Print(s)
```

Rules for Python variables

1) 123total ✕
2) total123 ✓
3) java2share ✓
4) ca$h ✕
5) _abc_abc_ ✓
6) def ✕
7) if ✕

Note:

1. If identifier starts with _ symbol then it indicates that it is private
2. If identifier starts with __(two under score symbols) indicating that strongly private identifier.
3.If the identifier starts and ends with two underscore symbols then the identifier is language defined special name,which is also known as magic methods.

Eg: __add__

Reserved Words

In Python some words are reserved to represent some meaning or functionality. Such type of words are called Reserved words.

There are 33 reserved words available in Python.

- **True,False,None**
- **and, or ,not,is**
- **if,elif,else**
- **while,for,break,continue,return,in,yield**
- **try,except,finally,raise,assert**
- **import,from,as,class,def,pass,global,nonlocal,lambda,del,with**

Note:

1. **All Reserved words in Python contain only alphabet symbols.**
2. **Except the following 3 reserved words, all contain only lower case alphabet symbols.**
    - **True**
    - **False**
    - **None**

Eg:

a= true ✕

a=True ✓

```
>>> import keyword
>>> keyword.kwlist
```

['False', 'None', 'True', 'and', 'as', 'assert', 'break', 'class', 'continue', 'def', 'del', 'elif', 'else', 'except', 'finally', 'for', 'from', 'global', 'if', 'import', 'in', 'is', 'lambda', 'nonlocal', 'not', 'or', 'pass', 'raise', 'return', 'try', 'while', 'with', 'yield']