

Python Basics:

Data Types:

- Int -> Numeric Format of data -> int()
- Float -> Decimal values -> float()
- String -> ' ' or " " -> str()
- Complex -> real and imaginary part

Variables:

- It Stores the value and changes the value

In [2]:

```
1 a = 100
2 a
```

Out[2]:

100

In [7]:

```
1 b = 30
2 b
```

Out[7]:

30

In [8]:

```
1 a
2 b
```

Out[8]:

30

In [9]:

```
1 (a,b)
```

Out[9]:

(100, 30)

In [10]:

```
1 print(a)
2 print(b)
```

100

30

Type()

In [14]:

```
1 type(a)
2 print(type(a),type(b))
```

<class 'int'> <class 'int'>

In [1]:

```
1 c = 'rajesh'
2 d = 25.00
3 e = True
4 g = '235.15645'
5 h = '545'
6 print(c,type(c))
7 print(d,type(d))
8 print(e,type(e))
9 print(g,type(g))
10 print(h,type(h))
```

```
rajesh <class 'str'>
25.0 <class 'float'>
True <class 'bool'>
235.15645 <class 'str'>
545 <class 'str'>
```

Variable assignments:

In [3]:

```
1 a,h,l,y = 23,23.000,'raju',False
2 print(a,type(a))
3 print(h,type(h))
4 print(l,type(l))
5 print(y,type(y))
```

```
23 <class 'int'>
23.0 <class 'float'>
raju <class 'str'>
False <class 'bool'>
```

In [4]:

```
1 g = i = l = 520
2 print(g,i,l)
```

```
520 520 520
```

Dynamic way of Type casting values

In [16]:

```
1 k = input("Enter a number:")
2 print(k,type(k))
3 print(int(k),type(int(k)))
```

```
Enter a number:456
456 <class 'str'>
456 <class 'int'>
```

In [18]:

```
1 k = input("Enter a number:")
2 print(k,type(k))
3 print(float(k),type(float(k)))
4 print(k,type(k))
```

```
Enter a number:45
45 <class 'str'>
45.0 <class 'float'>
45 <class 'str'>
```

In [22]:

```
1 p = int(input())
2 print(p,type(p))
```

```
45645
45645 <class 'int'>
```

Task-1:

Input: 32.56
23.45

Output: Given numbers are 32.56 and 23.45

Type casting of values to integers are 32 and 23

Type casting of values to String are '32' and '23'

In [1]:

```
1 l = float(input())
2 k = float(input())
3 print("Given numbers are",l,"and",k)
4 print("Type casting of values to integers are",int(l),
5       "and",int(k))
6 print("Type casting of values to Strings are '"+
7       str(int(l))+"' and '"+str(int(k))+"'")
```

456.215

125

Given numbers are 456.215 and 125.0

Type casting of values to integers are 456 and 125

Type casting of values to Strings are '456' and '125'

Operators:

- Arithmetic -> +, -, *, /, %, //, **
- Relational -> >, <, >=, <=, !=, ==
- Assignment -> +=, -=, *=, /=, %=
- Logical -> AND(&&), OR(||), NOT(!)
- Bitwise -> &, |, ~, >>, <<
- Identity -> is, is not
- Membership -> in, not in

In [3]:

```
1 n = 23
2 print(n >> 5)
3 print(n << 5)
```

0

736

Task-2:

Equation rule: $2x*3+5y*2+6$

Input: 3.45 => x Value

34 => y Value

Output: Square of 3 is: 9

Cube of 3 is: 27

Addition of 3 and 34 is: 37

Difference of 3 and 34 is: -31

Power of 34 and 3 is: 39304

Floor Division of 3 and 34 is: ?

Multiplication of 3 and 34 is: 102

Division of 3 and 34 is: ?

Equation value is: ?

Output Formatting:

- %
- .format

In [1]:

```
1 a = 20
2 print("a value is:%d"%a)
```

a value is:20

In [2]:

```
1 a = 10
2 b = 30
3 print("a value is: %d and b value is: %d"%(a,b))
```

a value is: 10 and b value is: 30

In [3]:

```
1 print("a value is: {}".format(a))
```

a value is: 10

In [6]:

```
1 print("a value is: {1} and b value is: {0}".format(a,b))
```

a value is: 30 and b value is: 10