

## data types and conversions

1. int
2. float
3. string

In [1]:

```
1 n1 = 31
2 type(n1)
```

Out[1]:

int

In [3]:

```
1 n2 = 13.7
2 print("n2 = ", n2)
3 type(n2)
```

n2 = 13.7

Out[3]:

float

In [5]:

```
1 s = "sri"
2 print(s)
3 type(s)
```

sri

Out[5]:

str

In [7]:

```
1 n = 12
2 m = 12.7
3 type(n)
4 type(m)
```

Out[7]:

float

In [8]:

```
1 n =2
2 m=3
3 print(type(n))
4 print(type(m))
```

<class 'int'>

<class 'int'>

In [11]:

```
1 n = 3
2 print(type(n))
3 print(type(str(n)))
```

<class 'int'>

<class 'str'>

In [12]:

```
1 n1 = 28
2 s = str(n1)
3 print(type(s))
```

<class 'str'>

In [13]:

```
1 num1 = "12"
2 num2 = "10"
3 print(num1+num2)
```

1210

In [14]:

```
1 s1 = "yamini"
2 s2 = "sri"
3 print(s1+s2)
```

yaminisri

In [15]:

```
1 n1 = 12
2 n2 = 10
3 print(n1+n2)
```

22

In [16]:

```
1 n1 = 13.0
2 n2 = 28.4
3 print(n1 +n2)
```

41.4

## Indentation

In [17]:

```
1 n1,n2 = 28,3
2 if(n1>n2):
3     print("n1 is greater than n2")
```

n1 is greater than n2

In [19]:

```
1 n1,n2 = 3 ,4
2 if(n1>n2):
3     print("n1 is greater than n2")
4 else:
5     print("wrong statement")
```

wrong statement

## Reading input dynamically

In [22]:

```
1 x = input()
2 print(x)
3 print(type(x))
```

123

123

<class 'str'>

In [23]:

```
1 a = 123
2 print(type(a))
3 f = float(a)
4 print(type(f))
5 print(a)
6 print(f)
```

<class 'int'>

<class 'float'>

123

123.0

In [26]:

```
1 n = int(input("Enter a value"))
2 print(n)
3 print(type(n))
4
```

Enter a value283

283

<class 'int'>

In [27]:

```
1 f = float(input("enter a value"))
2 print(f)
3 print(type(f))
```

```
enter a value283
283.0
<class 'float'>
```

## operators

1. Arithmetic operators
2. Assignment operators
3. comparison operators
4. logical operators
5. identity operators
6. membership operators
7. bitwise operators

### 1. arithmetic operators

- +, -, /, %, //, \*

In [29]:

```
1 a,b = 3,8
2 print("a+b =",3+8)
3 print("a-b =",8-3)
4 print("a*b =",3*8)
5 print("a/b =",8/3)
6 print("a%b =",8%3)
7 print("a//b =",8//3)
8 print("a**b =",8**3)
```

```
a+b = 11
a-b = 5
a*b = 24
a/b = 2.6666666666666665
a%b = 2
a//b = 2
a**b = 512
```

### 2. assignment operator

- =, +=, -=, \*=, /=,

In [30]:

```
1 a =28
2 print(a)
```

28

In [31]:

```
1 a += 28 # a= a+1
2 print(a)
```

56

In [32]:

```
1 a +=1
2 print(a)
```

57

In [33]:

```
1 a -=1
2 print(a)
```

56

In [34]:

```
1 b += 1
2 print(b)
```

9

In [36]:

```
1 c= 3
2 c += 1
3 print(c)
```

4

### 3. comparison operator

- ==,<=,>=,>,<,<!=

In [38]:

```
1 a,b = 3,4
2 print(a==b)
3 print(a<b)
4 print(a>b)
5 print(a<=b)
6 print(a>=b)
7 print(a!=b)
```

False  
True  
False  
True  
False  
True

## logical operator

- and or not

In [40]:

```
1 a =3
2 print(a<6 and a>2)
3 print(a<6 or a>2)
```

True  
True

In [41]:

```
1 res = a<6 or a>2
2 print(not(res))
```

False

## 5. Identify operators

- is, is not

In [42]:

```
1 x,y = 5,3
2 print(x is y)
```

False

In [43]:

```
1 print(x is not y)
```

True

In [45]:

```
1 a,b = 6,6
2 print(a is b)
```

True

## 6. members operators

- in, not in

In [46]:

```
1 fruits = ["apple", "gova", "grapes"]
2 print('apple' in fruits)
```

True

In [47]:

```
1 print('bannana' in fruits)
```

False

In [48]:

```
1 print('bannana 'not in fruits)
```

True

## bitwise operators

- &, |, >, <, ^, ~

In [\*]:

```
1 a = int(input("Enter 1st value:"))
2 b = int(input("Enter 2nd value:"))
```

In [\*]:

```
1 a|b
```

In [ ]:

```
1
```