Datatypes and conversions

1. int
2. float
3. string

In [2]:

```
1 n1 = 7
2 type(n1)
```

Out[2]:

```
int
```

In [3]:

```
1 n2 = 76.7
2 print("n2")
3 type(n2)
```

```
n2
```

Out[3]:

```
float
```

In [4]:

```
1 n1 = 55
2 print("n1 = ",n1)
3 type(n1)
```

```
n1 =  55
```

Out[4]:

```
int
```

In [6]:

```
1 n2 = 44.5
2 print("n2 = ",n2)
3 type(n2)
```

```
n2 =  44.5
```

Out[6]:

```
float
```

In [7]:

```
s = "apssdc"
print(s)
type(s)
```

```
apssdc
```

Out[7]:

```
str
```

In [8]:

```
n = 77
m = 55
print(type(n))
print(type(m))
```

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

In [9]:

```
n = 31
print(type(n))
print(type(str(n)))
```

```
<class 'int'>
<class 'str'>
```

In [10]:

```
n1 = 65
s = str(n1)
print(type(s))
```

```
<class 'str'>
```

In [11]:

```
s1 = "paddu"
s2 = "aswini"
print(s1+s2)
```

```
padduaswini
```

In [12]:

```
n1,n2 = 17,15
if(n1<n2): #F
    print("n1 is greater than n2")
else:
    print("wrong statemaent")
```

```
wrong statemaent
```

In [14]:

```
n1,n2 = 77,55
if(n1>n2):print("n1 is greater than n2")
```

```
n1 is greater than n2
```

In [15]:

```
n1,n2 = 33,88
if(n1<n2):#F
    print("n1 is big")
else:
    print("n2 is big")
```

```
n1 is big
```

Reading input dynamically

In [16]:

```
x = input()
print(x)
```

```
779
779
```

In [17]:

```
x = input()
print(x)
print(type(x))
```

```
998
998
<class 'str'>
```

In [18]:

```
a = 45
print(type(a))
```

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

In [19]:

```
a = 777
print(type(a))
f = float(a)
print(type(f))
print(a)
print(f)
```

```
<class 'int'>
<class 'float'>
777
777.0
```

In [21]:

```
n = int(input())
print(n)
print(type(n))
```

```
108
108
<class 'int'>
```

In [22]:

```
n = int(input("enter a value"))
print(n)
print(type(n))
```

```
enter a value104
104
<class 'int'>
```

In [23]:

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

```
enter a value7774
7774.0
<class 'float'>
```

Operators

1. Arithemetic operators
2. Assignment operators
3. Comparison operators
4. Logical operators
5. Identity operators
6. Membership operators
7. Bitwise operators

1. Arithemetic operators

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

In [24]:

```
a,b = 3,7
print("a+b =",3+7)
print("a-b =",3-7)
print("a*b =",3*7)
print("a/b =",3/7)
print("a%b =",3%7)
print("a//b =",3//7)
print("a**b =",3**7)
```

```
a+b = 10
a-b = -4
a*b = 21
a/b = 0.42857142857142855
a%b = 3
a//b = 0
a**b = 2187
```

2. assignment operators

- =, +=, -=, += etc

In [25]:

```
a = 7
print(a)
```

```
7
```

In [30]:

```
a = 5
a += 3 # a = a+3
print(a)
```

```
8
```

In [31]:

```
a -= 7 # a=a-7
print(a)
```

```
1
```

In [32]:

```
a *= 3 # a=a*3
print(a)
```

```
3
```

3. Comparison operators

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

In [33]:

```
n1,n2 = 5,7
print(n1==n2)
print(n1 != n2)
```

```
False
True
```

In [34]:

```
n1,n2 = 3,3
print(n1>n2)
print(n1==n2)
print(n1<n2)
print(n1!=n2)
```

```
False
True
False
False
```

In [35]:

```
n1,n2 = 9,5
print(n1==n2)
print(n1>n2)
print(n1<n2)
print(n1>=n2)
print(n1<=n2)
print(n1!=n2)
```

```
False
True
False
True
False
True
```

4. Logical operators

- and, or, not

In [36]:

```
a = 7
print(a<6 and a>2)
```

```
False
```

In [37]:

```
a = 4
print(a<6 and a>2)
print(a<6 or a>2)
```

```
True
True
```

In [38]:

```
a = 77
print(a<66 and a>76)
res = a<66 or a>76
print(not(res))
```

```
False
False
```

5. Identity operators

- is, is not

In [39]:

```
x,y = 4,8
print(x is y)
```

```
False
```

In [40]:

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

```
True
```

In [41]:

```
a,b = 5,5
print(a is b)
print(a is not b)
```

```
True
False
```

6. Membership operators

- in, not in

In [43]:

```
fruits = ["apple","gova","grapes"]
print('apple' in fruits)
print('banana' in fruits)
print('apple' not in fruits)
```

```
True
False
False
```

7. Bitwise operators

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

In [*]:

```

```

In [*]:

```

```

In [ ]:

```

```

In [ ]:

```

```

In [ ]:

```

```

In [ ]:

```

```

In [ ]:

```

```