###Data types and conversions

```
1. int
2. float
3. string

```

In [4]:

```
n1= 13
print("n1=",n1)
type(n1)
```

```
n1= 13
```

Out[4]:

```
int
```

In [5]:

```
n2=32.65
print("n2",n2)
type(n2)
```

```
n2 32.65
```

Out[5]:

```
float
```

In [6]:

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

Out[6]:

```
str
```

In [7]:

```
m=9
n=6
type(n)
type(m)
```

Out[7]:

```
int
```

In [10]:

```
m=9
n=6
print(type(n))
print(type(str(m)))
```

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

In [12]:

```
n=6
s=str(n)
print(type(s))
```

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

In [13]:

```
num1="7"
num2="6"
print(num1+num2)
```

```
76
```

In [14]:

```
n1=7
n2=6
print(n1+n2)
```

```
13
```

###indentation

In [23]:

```
n1,n2=13,12
if(n1<n2):
    print("n1 is greater than n2")
else:
    print("wrong statement")
```

```
wrong statement
```

reading input dynamically

In [24]:

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

```
x=123
x=123
<class 'str'>
```

In [28]:

```
a=123
print(a)
print(type(a))
f=float
print(type(f))
print(f)
```

```
123
<class 'int'>
<class 'type'>
<class 'float'>
```

In [29]:

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

```
enter a value12
12
<class 'int'>
```

In [30]:

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

```
enter value12.9
12.9
<class 'float'>
```

operators

1. arithmetic operators
2. assignment operators
3. comparision operators
4. logical operators
5. identity operators
6. membership operators
7. bitwise operators

arithmetic operators

In [31]:

```
a,b=2,3
print("a+b=",2+3)
print("a-b=",2-3)
print("a*b=",2*3)
print("a/b=",2/3)
print("a%b=",2%3)
print("a//b=",2//3)
print("a**b=",2**3)
```

```
a+b= 5
a-b= -1
a*b= 6
a/b= 0.6666666666666666
a%b= 2
a//b= 0
a**b= 8
```

assignment operator

=,+=,-=,etc

In [32]:

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

```
7
```

In [33]:

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

```
9
```

In [34]:

```
a-=3
print(a)
```

```
6
```

In [35]:

```
a*=2
print(a)
```

```
12
```

In [36]:

```
a/=3
print(a)
```

```
4.0
```

In [37]:

```
a%=4
print(a)
```

```
0.0
```

In [38]:

```
a//=3
print(a)
```

```
0.0
```

comparision operators

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

In [39]:

```
n1,n2=4,5
print(n1==n2)
print(n1<=n2)
print(n1>=n2)
print(n1<n2)
print(n1>n2)
```

```
False
True
False
True
False
```

logical operators

and, or, not

In [40]:

```
a=5
print(a<3 and a>7)
```

```
False
```

In [41]:

```
print(a<3 or a>7)
```

```
False
```

In [43]:

```
res=a<3 or a>7
print(not(res))
```

```
True
```

identity operators

is, is not

In [44]:

```
x,y=5,9
print(x is y)
```

```
False
```

In [45]:

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

```
True
```

In [46]:

```
x,y=6,6
print(x is y)
print(x is not y)
```

```
True
False
```

membership operators

in, not in

In [47]:

```
friends=["siri","paddu","divv"]
print('siri' in friends)
print('paddu' not in friends)
```

```
True
False
```

bitwise operators

&,|,<<,>>,^ etc

In [50]:

```
a=int(input("enter first value"))
b=int(input("enter second value"))
```

```
enter first value5
enter second value8
```

In [51]:

```
print(a|b)
```

```
13
```

In [53]:

```
print(a&b)
```

```
0
```

In [54]:

```
print(a<<b)
```

```
1280
```

In [55]:

```
print(a>>b)
```

```
0
```

In [ ]:

```

```