

```
In [ ]: Arithmetic : +,-,*,/,%,//(floor),pow(**)
Assignment :- =,+=,-=,*=,....
Relational/Comparision :- ==,!=,<,>,<=,>=
Logical :- and ,or,not
Bitwise :- & ,| ,^(xor),<<,>> ,~
Membership :- in,not in
Identity :- is,is not
```

```
In [4]: a,b = 6,8
print(a+b,a-b,a*b)
print(a/b,a%b,a//b,a**2)
```

```
14 -2 48
0.75 6 0 36
```

```
In [6]: x = 7
x += 5 # x=x+5=7+5=12
x
```

```
Out[6]: 12
```

```
In [8]: y = 3
y -= x
y
```

```
Out[8]: -9
```

```
In [9]: z = 8
z *= y
z
```

```
Out[9]: -72
```

```
In [16]: m,n = 8,9
print(m==n)
print(m!=n)
print(m>n,m<n)
print(m<=n,m>=n)
```

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

```
In [22]: m,n = 8,9
print(m>n and m!=n)
print(m<n and m!=n)
print(m>n or m<n)
print(m<n or m==n)
print(not(m<n))
```

```
False
True
True
True
False
```

```
In [28]: j = "workshop"
print("p" in j,"z" in j)
print("z" not in j,"w" not in j)
print("wor" in j,"kop" in j)
```

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

```
In [30]:
```

```
140714327970824 140714327970856
False
```

```
In [34]: m,n = 8,8.0
print(id(m),id(n))
print(m is n,m is not n)
```

```
140714327970824 1903969438256
False True
```

```
In [35]: a,b = 70,80
print(a&b,a|b,a^b)
```

```
64 86 22
```

```
In [ ]: conditional statements
```

```
-----
if
if else
elif
nested if
```

```
In [ ]: syntax for if statement
```

```
-----
if(condition):
    statements
```

```
In [37]: n = int(input())
         if(n>0):
             print("positive")
```

-5

```
In [ ]: syntax for if statement
-----
         if(condition):
             statements
         else:
             statements
```

```
In [38]: n = int(input())
         if(n>0):
             print("positive")
         else:
             print("Negative")
```

-3

Negative

```
In [39]: a,b=int(input()),int(input())
         if(a>b):
             print(a,"is big")
         else:
             print(b,"is big")
```

90

34

90 is big

```
In [41]: n = int(input())
         if(n%2==0):
             print("even")
         else:
             print("odd")
```

5

odd

```
In [ ]: syntax for elif statement
-----
         if(condition1):
             statements
         elif(condition2):
             statements
         .....
         else:
             statements
```

```
In [42]: a,b,c=int(input()),int(input()),int(input())
         if(a>b and a>c):
             print(a,"is big")
         elif(b>c):
             print(b,"is big")
         else:
             print(c,"is big")
```

```
56
78
12
78 is big
```

```
In [45]: n = int(input())
         if(n==1):
             print("sunday")
         elif(n==2):
             print("monday")
         elif(n==3):
             print("tuesday")
         elif(n==4):
             print("wednesday")
         elif(n==5):
             print("thursday")
         elif(n==6):
             print("friday")
         elif(n==7):
             print("saturday")
         else:
             print("invalid")
```

```
9
invalid
```

```
In [ ]: syntax for nested if statement
         -----
         if(condition):
             statements
             if(condition):
                 statements
             else:
                 statements
         else:
             statements
```

```
In [48]: n = int(input())
         if(n%2==0):
             print("even")
             if(n>10):
                 print(n**2)
             else:
                 print(n**3)
         else:
             print("odd")
```

```
12
even
144
```

In []:

In []:

In []:

In []:

In []:

In []:

In []:

In []:

In []:

In []:

In []:

In []:

In []:

In []:

In []:

In []: