Day Objectives

- Operators
- Conditional statements
- loops

In [2]:
```
# <<
5 << 4 # m<<n
```

Out[2]: 80

In [1]:
```
int('1010000',2)
```

. . .

In [10]:
```
# >>
5 >> 5
```

. . .

Membership Operators

- in, not in

Operator	Description
in	It returns true if value/variable is found in the sequence and false otherwise
not in	It returns true if value/variable is not found in the sequence and false otherwise

In [11]:
```
'o' in 'development'
```

Out[11]: True

In [12]:
```
a = 'development'

'ol' in a
```

Out[12]: False

In [13]:
```
'dev' in a
```

Out[13]: True

In [15]:
```
1 'eVe' not in a
```

Out[15]: True

- range(m,n) --> it will create a sequence from m to n-1
- range(k) --> 0 to k-1
- range(start,stop,step/incre/decre)

In [16]:
```
1 8 in range(4,8) #  4 5 6 7
```

Out[16]: False

In [19]:
```
1 7 in range(4,8)
```

Out[19]: True

In [24]:
```
1 0 in range(6) # 0 1 2 3 4 5
```

Out[24]: True

In [28]:
```
1 4 not in range(1,10,2) # 1 3 5 7 9
```

Out[28]: True

In [34]:
```
1 9 in range(0,10,3) # 0 3 6 9
```

Out[34]: True

In [39]:
```
1 46 in range(20,50,55) # 20
```

Out[39]: False

Identity Operators

- is , is not

Operator	Description
is	It returns true if two variables point the same object and false otherwise
is not	It returns false if two variables point the same object and true otherwise

In [40]:
```
x = 9
y = 30
z = y - 21

x is z
```

Out[40]:
```
True
```

In [41]:
```
id(x)
```

...

In [42]:
```
id(z)
```

...

Conditional Statements or

Decision Making Statements or

Control flow Statements.

if syntax

```
Syntax:
if condition:
    statements
```

In [44]:
```
# Program to check given number is positive or not.
n = int(input("Enter a number: "))
if n>0:
    print("+ve")
```

```
Enter a number: 89
+ve
```

IF ELSE

```
Syntax:
if condition:
    statements
else:
    statements
```

In [52]:
```
# positive or negative
num = int(input("Enter any value: "))
if num<0:
    print("-ve")
elif num>0:
    print("+ve")
else:
    print(0)
```

```
Enter any value: -7
-ve
```

Tasks

- WAP to program even or odd
- WAP to check whether a person is eligible to vote or not by taking his/her age as input.
- WAP to check given number is divisible by both 3 and 6 or not.
- WAP to display the grades of students based on their python marks.

In [3]:
```
# TASK-1
n = int(input("Enter a number: "))
if n%2!=0:
    print("Odd")
else:
    print("Even")
```

```
Enter a number: 14
Even
```

In [8]:
```
# task-2
age = int(input("ENTER UR AGE: "))
if age>=18:
    print("Eligible")
else:
    print("After {} years u get eligibility...".format(18-age))
```

...

In [13]:
```
# task-3
n = int(input("Enter any number: "))
if n%3==0 and n%6==0:
    print("Divisible by both 3 and 6")
else:
    print("Not divisible")
```

```
Enter any number: 10
Not divisible
```

In [15]:
```
# task-4
a,b,c,d = 14,52,70,600
if a>b and a>c and a>d:
    print(a,"is maximum")
elif b>c and b>d:
    print(b,"is max")
elif c>d:
    print(c,"is max")
else:
    print(d,"is maximum")
```

```
600 is maximum
```

no of frnds = 5
no of chocolates = 15

o/p: distributed equally...

no of frnds = 6
no of chocolates = 20

o/p: 4 chocolates needed..

In [19]:
```
a=int(input("enter no. of friends"))
b=int(input("enter no. of chocolates"))
if b%a==0:
    print("distributed equally")
else:
    print(a-b%a,"chocolate/s needed to distribute equally")
```

...

In [25]:
```
year = int(input("Enter a year: "))
if year%400==0 or (year%4==0 and year%100!=0):
    print("Leap year")
else:
    print("Not a leap year")
```

...

Nested if

```
if condition:
    statements
    if condition:
        statements
    else:
        statements
elif condition:
    statemtns
    if condition:
        statements
else:
    statements
    if condition:
        stetements
```

In [28]:

```
# example
urn = 'vits@gmail.com'
pwd = 'Vit$890'
username = input("Enter username: ")
if urn==username:
    password = input("Enter ur password: ")
    if password==pwd:
        print("******** Welcome *********")
    else:
        print("Invalid Password!!!")
else:
    print("Invalid Username..")
```

...

In [31]:

```
urn = 'vits@gmail.com'
pwd = 'Vit$890'
username = input("Enter username: ")
if urn==username:
    z = int(input("Enter any number: "))
    if z>=10 and z<=99:
        password = input("Enter ur password: ")
        if password==pwd:
            print("******** Welcome *********")
        else:
            print("Invalid Password!!!")
    else:
        print("Invalid number..")
else:
    print("Invalid Username..")
```

...

Tasks

1. Read your age and name and write a program to display the year in which you will turn 100 years old.

2. Read radius and height of a cone and write a program to find the volumne of a cone.
3. Write a program to compute the distance between two points taking as input from the user.

In [ ]:
```
1
```