```
x=97
y=27
list=[10 , 20, 30 , 40 , 50 ]

if (x not in list ):
      print("x is NOT present in givent list")
else:

      print("x is present in the given list")
if (y in list):
      print("y is prsent in given list")
else:
      print("y is NOT present in given list ")
```

```
x is NOT present in givent list
y is NOT present in given list
```

```
num1 = 300
num2 = 300.0
if num1 > num2 :
      print("The first number is greater .")
elif num1 < num2 :
      print("The second is greater .")
else :
      print("the numbers are equal .")
```

```
the numbers are equal .
```

```
num = float(input("Enter a number: "))
if num > 0:
   print("Positive number")
elif num == 0:
   print("Zero")
else:
   print("Negative number")
```

```
Enter a number: 2
Positive number
```

```
num = int(input("Enter a number: "))
if (num % 2) == 0:
   print("{0} is Even".format(num))
else:
   print("{0} is Odd".format(num))
```

```
Enter a number: 2
2 is Even
```

```
year = 2000


if (year % 400 == 0) and (year % 100 == 0):
    print("{0} is a leap year".format(year))


elif (year % 4 ==0) and (year % 100 != 0):
    print("{0} is a leap year".format(year))


else:
    print("{0} is not a leap year".format(year))
```

```
2000 is a leap year
```

```
lower = 800
upper = 1000

print("Prime numbers between", lower, "and", upper, "are:")
```

```
for num in range(lower, upper + 1):

   if num > 1:
       for i in range(2, num):
           if (num % i) == 0:
               break
       else:
           print(num)
```

```
Prime numbers between 800 and 1000 are:
809
811
821
823
827
829
839
853
857
859
863
877
881
883
887
907
911
919
929
937
941
947
953
967
971
977
983
991
997
```

```
num = 7


factorial = 1


if num < 0:
   print("Sorry, factorial does not exist for negative numbers")
elif num == 0:
   print("The factorial of 0 is 1")
else:
   for i in range(1,num + 1):
       factorial = factorial*i
   print("The factorial of",num,"is",factorial)
```

```
The factorial of 7 is 5040
```

```
num = 12


for i in range(1, 11):
   print(num, 'x', i, '=', num*i)
```

```
12 x 1 = 12
12 x 2 = 24
12 x 3 = 36
12 x 4 = 48
12 x 5 = 60
12 x 6 = 72
12 x 7 = 84
12 x 8 = 96
12 x 9 = 108
12 x 10 = 120
```

```
text = 'good morning everyone . have a nice day'
print("\n Converted string:")
print(text.swapcase())
print("\n Converted string")
print(text.capitalize())
print("\n Original String;")
print(text.lower())
```

```
 Converted string:
GOOD MORNING EVERYONE . HAVE A NICE DAY

 Converted string
Good morning everyone . have a nice day

 Original String;
good morning everyone . have a nice day
```

```
my_string="hello All"
char_count1=my_string.count("0")
char_count2=my_string.count("1")
print(my_string)
print(char_count1)
print(char_count2)
print(len(my_string))
```

```
hello All
0
0
9
```

```
#Following methods allow new items to be added to list
L1=[10,30,50,20,40]
print(L1)
L1 , append(100) #appends new item
print("after append", L1)
L1 , insert (3,200) #inserts new value at index
print('after insert',L1)
C=L1,  count(30)
print('count of 30',c)
L1, extend([11,22,33])
print('after extend', L1)
```

```
#slicing the tuple function
tuple1 = (0,1,2,3,4,5)
print(tuple1[1:])
print(tuple1[::-1])
print(tuple1[2:10])
```

```
(1, 2, 3, 4, 5)
(5, 4, 3, 2, 1, 0)
(2, 3, 4, 5)
```

```
#Create DataFrame from lists of lists
#Import pandas library
import pandas as pd
#initialize list of lists
data = [['Abid Azam, 202307010001],['Ananya',202307020097],['Aryan', 202307026
#Create the pandas DataFrame
df = pd, DataFrame(data , coloums=['Name' , 'Enrollment ID'])
#print dataframe,
print(df)
```

```
  File "<ipython-input-1-38c2c46a5d5c>", line
5
    data = [['Abid Azam, 202307010001],
['Ananya',202307020097],['Aryan',
2023070200700]]
```