Use of Print Statement

```
name = "Yashswi Gandhak"
age = 20


# Simple print() statement
print("My name is ",name, "and My age is ",age)
```

```
     My name is  Yashswi Gandhak and My age is  20
```

```
# Formatted string
print(f"My name is {name} and My age is {age} ")
```

```
     My name is Yashswi Gandhak and My age is 20
```

```
# Use of format method
print("My name is {} and My age is {} ".format(name,age))
```

```
     My name is Yashswi Gandhak and My age is 20
```

```
# Use of format method
print("My name is {my_name} and My age is {my_age} ".format(my_age=age,my_name =name))
```

```
     My name is Yashswi Gandhak and My age is 20
```

```
age = int(input("Enter your age : "))
if age >= 18 and age <= 45:
  print("You are young blood")
```

```
     Enter your age : 20
     You are young blood
```

```
age = int(input("Enter your age : "))
if age >= 18 and age <= 45:
  print("You are young blood because your age is {}".format(age))
else :
  print("Thanks for your help, we will let you know")
```

```
     Enter your age : 23
     You are young blood because your age is 23
```

```
print("----------------------------------------")
print("Welcome to billing counter")
print("----------------------------------------")
price = int(input("Enter the product price : "))
if price > 1000:
  discounted1 = price - (price*(20/100))
  print("Wohoo ! You got 20% discount and the discounted price is {}".format(discounted1))
  print("Congradulations ")
else :
  discounted2 = price - (price*(30/100))
  print("Wohoo! You got 30% discount and the discounted price is {}".format(discounted2))
```

```
     Enter the product price : 1200
     You will get 10% discount and the discounted price is 1080.0
```

```
print("List of product prices range and their discounts : ")
print({'>3000': '30 %\n',
       '>2000 and <=3000': '20 %\n',
       '>1000 and <=2000': '10%\n'})
product_price = int(input("Enter the price of product you chose : "))
if product_price > 3000:
  if product_price == 3999 :
    print("Congratulations! You get a Goa Trip")
  print("Discounted price at 30% of discount is {}".format(product_price*0.7))
elif product_price >2000 and product_price <= 3000:
  if product_price == 2999:
    print("Congratulations! You get an additional surprise gift")
  print("Discounted price at 20 % of discount is {}".format(product_price*0.8))
```

```
elif product_price > 1000 and product_price <= 2000:
  print("Discounted price at 10 % of discount is {}".format(product_price*0.9))
else :
  print("Sorry ! Chosen product price is too low , we can not apply any discount on it. Please choose another product from above given range
```

```
List of product prices range and their discounts :
{'>3000': '30 %\n', '>2000 and <=3000': '20 %\n', '>1000 and <=2000': '10%\n'}
Enter the price of product you chose : 2500
Discounted price at 20 % of discount is 2000.0
```

Loops

1. While loop
2. For loop
3. Nested loops

While loop

> continuous iteration and the control will throw out of a loop once the condition becomes false, and it goes to the else block if included, otherwise when the condition is true it executes repeatedly.Indented block

```
# While loop or While else loop
joining_age = 21
while joining_age <=60:
  joining_age = joining_age + 1
  print(joining_age)
print(f"It's time for retirement because you have reached a limit of {joining_age} as per the government rules")
```

```
22
23
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60
61
It's time for retirement because you have reached a limit of 61 as per the government rules
```

```
# While loop or While else loop
joining_age = 21
```

```
while joining_age == 60:
  joining_age = joining_age + 1
  print(joining_age)
else :
  print(f"It's time for retirement because you have reached a limit of {joining_age} as per the government rules")
```

```
It's time for retirement because you have reached a limit of 21 as per the government rules
```

Observations :

1. while loop when we use <= or only < or > or >= it iterates till the condition becomes false
2. In while loop when we use == it checks for that particular condition like in above code it checks for the joining age == 60 or not
3. In while loop we have to increment the value of that particular variable
4. Else loop has also been used if the condition in while loop becomes false

```
# ATM Machine with 1000 Rs.
total_amount = 1000
while total_amount != 0:
  print(total_amount)
  total_amount = total_amount - 100
else :
  print("Paisa Bharo Bank Walo")
```

```
1000
900
800
700
600
500
400
300
200
100
Paisa Bharo Bank Walo
```

```
value = input("Enter a number to create a math table till 10 : ")
i = 1
while i<= 10 :
  print(value*i)
  i = i+1
```

```
Enter a number to create a math table till 10 : 12
12
1212
121212
12121212
1212121212
121212121212
12121212121212
1212121212121212
121212121212121212
12121212121212121212
```

> This repeated 12 comes because we have taken 'value' input as a string and it prints the value repeatedly and in below example we have taken a user input as integer so it creates a math table from 1 to 10

```
value = int(input("Enter a number to create a math table till 10 : "))
i = 1
while i<= 10 :
  print(value*i)
  i = i+1
```

```
Enter a number to create a math table till 10 : 12
12
24
36
48
60
72
84
96
```

```
108
120
```

For loop

```
lst = ["Yashswi",10,9.25,9,85,'Topper','University Topper']
```

```
print(lst)
```

```
['Yashswi', 10, 9.25, 9, 85, 'Topper', 'University Topper']
```

```
type(lst)
```

```
list
```

```
for item in lst :
  print(item)
```

```
Yashswi
10
9.25
9
85
Topper
University Topper
```

```
# Indexing
print(lst[0])
```

```
Yashswi
```

```
name = "Yashswi"
for each_letter in name :
  print(each_letter,end = " ")
```

```
Y a s h s w i
```

> List and String both are the collection of characters or the elements and we can use indexing there

```
# Range Function
for i in range(1,11):
  print(i,end = " ") # Here, end and stop bit and step are optional
```

```
1 2 3 4 5 6 7 8 9 10
```

Nested loops

```
n = 5
for i in range(0,n):
  for j in range(0,i+1):
    print("*",end = "")
  print("\r")
```

```
*
**
***
****
*****
```

```
n = 5
for i in range(0,n):
  for j in range(0,i+1):
    print("*",end = "")
  print("\n")
```

```
    # New line is occuring because we used here \n
```

```
       *
       **
       ***
       ****
       *****
```

```
n = 5
k = n-1
for i in range(0,n):
  for j in range(0,k):
    print(" ")
    k = k-1
  for l in range(0,i+1):
    print("*",end = "")
  print('\r')
```

```
       *
       **
       ***
       ****
       *****
```