**Program 1:** Practicing with simple while loop, giving them the final condition of loop.

**Code:**

count = 0

f = eval(input("Enter your final condition where you want to break the loop: "))

while (count < f):

print("The value of count:", count)

count = count+1

print("I am using while loop", count, "time.")

**Output:**

Enter your final condition where you want to break the loop: 3

The value of count: 0

I am using while loop 1 time.

The value of count: 1

I am using while loop 2 time.

The value of count: 2

I am using while loop 3 time.

**Program 2:** Practicing with simple while loop with infinite iterations as the condition is always true.

**Code:**

var = 1

while var == 1 : # This will generate an infinite loop, as condition is always true num = eval(input("Enter a number :"))

print("You entered: ", num)

print ("End of Loop!")

# use Ctrl+C to break the loop

**Output:**

Enter a number :4

You entered: 4

Enter a number :88

You entered: 88

**Program 3:** Write a program which takes the limit for while loop condition and sum the total amount.

**Code:**

n = eval(input("Enter the value to execute the while loop:"))

sum = 0

i = 1

while i <= n:

sum = sum + i

i = i+1

print("The sum is", sum)

**Output**

Enter the value to execute the while loop:6

The sum is 21

**Program 4:** Practicing with simple while loop with else condition.

**Code:**

i = 0

f = 10

while i < f:

print (i, " is less than final condition")

i = i + 1

else:

print (i, " is not less than final condition")

**Output:**

0 is less than final condition

1 is less than final condition

2 is less than final condition

3 is less than final condition

4 is less than final condition

5 is less than final condition

6 is less than final condition

7 is less than final condition

8 is less than final condition

9 is less than final condition

10 is not less than final condition

**Program 5:** Write a function *f* which takes one argument x, it will square the value of x and add 1 in it then return the answer to user.

**Code:**

def f(x):

res = x\*\*2 + 1

return res

**Output:**

Process finished with exit code 0

**Programming Exercise**:

Q.1 Write down a Python program, using While loop that generates Odd no’s in between 1 to 100.

**Input:**

i=1

while(i<=100):

if i % 2 != 0 :

print(i,"\t",end='')

i=i+1

**Output:**

1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81

83 85 87 89 91 93 95 97 99

Q.2 Write down a Python Program using While loop to generate the following outputs

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**Input:**

i=0

j=0

while(i<=3):

i=i+1

while(j<=13):

print("\*",end='')

j=j+1

print(" ")

j=0

i=0

j=0

while(i<=3):

i=i+1

print(" ", end='')

while (j <= 13):

print("\*", end='')

j = j + 1

print(" ")

j = 0

**Output:**

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**Input:**

i=0

j=1

while(i<=7):

i=i+1

while(j<=i):

print("\*",end='')

j=j+1

print(" ")

j=1

**Output:**

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**Input:**

i=0

j=0

while(i<=7):

i=i+1

while(j<=7-i):

print("\*",end='')

j=j+1

print(" ")

j=0

**Output:**

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Q.3 Write down a python program having one function for calculating factorial of a no.

And call that function within a While loop to generate factorial of numbers from 0 to 10

**Input:**

from math import\*

def fact1(n):

fact=1

for i in range(1,n+1):

fact=fact\*i

return fact

i=-1

while(i<=9):

i=i+1

print(i,"!","=\t",fact1(i))

**Output:**

0 ! = 1

1 ! = 1

2 ! = 2

3 ! = 6

4 ! = 24

5 ! = 120

6 ! = 720

7 ! = 5040

8 ! = 40320

9 ! = 362880

10 ! = 3628800