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| [LAB TASK NO -05] |
| **[KABEER AHMED (SE-28)]** |

DATE:

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

**INPUT:**

count=0  
f=eval(input(**"Enter the value 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 the value to break the loop **5**

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

The value of count 3

i am using while loop 4 time

The value of count 4

i am using while loop 5 time

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

**INPUT:**

var=1  
**while** var==1:  
 num=eval(input(**"Enter the Number "**))  
 print(**"You Entered"**,num)  
print(**"Loop is Ended"**)

**OUTPUT:**

Enter the Number 5

You Entered 5

Enter the Number 32

You Entered 32

Enter the Number 2

You Entered 2

Loop is Ended

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

**INPUT:**

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:**10**

The sum is 55

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

**INPUT:**

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.

**INPUT:**

**def** f(x):  
 res = x\*\*2 + 1  
 **return** res  
x1=int(input(**"Enter the Number "**))  
f(x1)  
print(**"The Result Is "**,f(x1))

**OUTPUT:**

Enter the Number **10**

The Result Is 101

**PROGRAMMING EXERCISE**

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

**INPUT:**

i=3  
**while** i<100:  
 **if**(i%2==0):  
 **break** print(i,end=**"\t"**)  
 i=i+2

**OUTPUT:**

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=1  
**while** i<10:  
 i=i+1  
 **while** j<i:  
 print(**"\*"**,end=**""**)  
 j=j+1  
 print(**""**)  
 j=1

**OUTPUT:**

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**INPUT:**

i=10  
j=1  
**while** i>1:  
 i=i-1  
 **while** j<i:  
 print(**"\*"**,end=**""**)  
 j=j+1  
 print(**""**)  
 j=1

**OUTPUT:**

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**INPUT:**

i=1  
**while** i<5:  
 print(**"\*"**,end=**""**)  
 j=1  
 **while** j<10:  
 print(**"\*"**,end=**""**)  
 j=j+1  
 i = i + 1  
 print(**""**)  
i=1  
**while** i<5:  
 print(**"\t\t\t"**,end=**""**)  
 print(**"\*"**,end=**""**)  
 j=1  
 **while** j<10:  
 print(**"\*"**,end=**""**)  
 j=j+1  
 i=i+1  
 print(**""**)

**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:**

**def** fact(x):  
 fact1 = 1  
 **for** i **in** range(1,x):  
 fact1=fact1\*i  
 **return** fact1  
**for** j **in** range(0,10+1):  
 fact(j)  
 print(**"The factorial of"**,j,**"is"**,fact(j))

**OUTPUT:**

The factorial of 0 is 1

The factorial of 1 is 1

The factorial of 2 is 1

The factorial of 3 is 2

The factorial of 4 is 6

The factorial of 5 is 24

The factorial of 6 is 120

The factorial of 7 is 720

The factorial of 8 is 5040

The factorial of 9 is 40320

The factorial of 10 is 362880