18/07/2025,FridayPython For Loop Practice

1. Print each character of a string.

Explanation: Use a for loop to iterate through each character in a string sequence.

```
A = str(input("enter the str :- "))
for i in A:
   print(i)
```

```
o/p ;  enter the str :- Sriram
S
r
i
r
a
m
```

2. Print all even numbers from a list.

Explanation: Iterate through a list and use a condition to check for even numbers.

```
list = [0,1,2,3,4,5,6,7,8,9,10,88,36,77,12,13,76,73,92,44,19,17]
for i in list:
   if i % 2 == 0:
      print(i)
```

```
o/p;-
0
2
4
6
8
10
```

```
88

36

12

76

92

44
```

3. Calculate the sum of numbers in a tuple.

Explanation: Use a for loop to iterate through a tuple and keep adding each number to a total variable.

```
tuple = (0,1,2,3,4,5,6,7,8,9,10,88,36,77,12,13,76,73,92,44,19,170)

total =0

for i in tuple:

   total += i

print(total)
```

```
o/p:- 755
```

4. Print names from a list of strings.

Explanation: Loop through a list of names and print each one.

```
name = ["sriram","sairam","ganesh","ravi","divakar","raju"]

for i in name:

   print(i)
```

```
o/p:-

sriram

sairam

ganesh

ravi

divekar

raju
```

5. Print square of numbers using range.

Explanation: Use range to generate numbers, then square each number inside the loop.

```
num = int(input(" enter num :- "))

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

   print(i ** 2)

   o/p:

enter num :- 4

1

4

9

16
```

6. Count vowels in a string.

Explanation: Loop through each character and check if it is a vowel using a condition.

```
vowels = str(input(" enter str :- "))

count = 0

for char in vowels:

   if char in ["a","e","i","o","u"]:

      count = count + 1

print(count)

o/p : - enter str :- sriram

2
```

7. Reverse a string using for loop.

Explanation: Iterate through the string and build a new reversed string by prepending characters.

```
str = str(input(" enter str :- "))

for i in range(0,len(str)):

   if str[i]:
    print(str[::-1])
```

```
o/p: -  enter str :- sriram

marirs

marirs

marirs

marirs

marirs

marirs
```

8. Check if elements in list are positive.

Explanation: Use a loop and condition to check and print whether each element is positive or not.

```
element = [1,-2,3,4,6,7,8,-4,-9,-10,11,12]

for i in element:

  if i >=0 :

    print(i,"positive")
```

```
  o/p:-

1 positive

3 positive

4 positive

6 positive

7 positive

8 positive

11 positive

12 positive
```

9. Print odd-indexed characters in a string.

Explanation: Use range and indexing to print characters that are at odd-numbered positions.

```
str = str(input("enter the str : - "))

for i in range(1,len(str)):

   if i % 2 != 0:

      print(str[i])
```

```
  o/p:--

enter the str : - sriram

r

r

m
```

10. Print multiples of 3 using range.

Explanation: Use range and an if condition to print numbers divisible by 3.

```
num = int(input("enter the num : - "))

for i in range(1,num):

   if i % 3 ==0:

      print(i,"is divisiable")
```

```
  o/p:-- enter the num : - 56

3 is divisiable

6 is divisiable

9 is divisiable

12 is divisiable

15 is divisiable

18 is divisiable

21 is divisiable

24 is divisiable
```

```
27 is divisiable
30 is divisiable
33 is divisiable
36 is divisiable
39 is divisiable
42 is divisiable
45 is divisiable
48 is divisiable
51 is divisiable
54 is divisiable
```

11. Find the product of numbers in a list.

Explanation: Iterate through the list and multiply each number to get the final product.

```
num = [1,2,3,4,5,6,7,8,9]
total =1
for i in num:
    total = i * total
print(total)
```

```
 o/p:-  362880
```

12. Count how many times a specific character appears in a string.

Explanation: Loop through the string and count how many times a specific character appears.

```
str = str(input("enter the str:- "))
count = 0
for i in str:
    if "r" in i:
        count = count +1
print(count)
```

```
o/p:-- enter the str:- sriram

            2
```

13. Print each element of a tuple with its index.

Explanation: Use range and indexing to print the index and corresponding element in the tuple.

```
tuple = ("sri",1,"ram",1.3,[1,2,3])

for i in range(0,len(tuple)):

   print(i,tuple[i])
```

```
o/p:--

 0 sri

1 1

2 ram

3 1.3

4 [1, 2, 3]
```

14. Print numbers from 10 to 1 using range.

Explanation: Use a reversed range to print numbers in descending order.

```
for i in range(10,0,-1):

   print(i)
```

```
o/p:

10

9

8

7

6

5

4

3
```

```
2

1
```

15. Convert each string in a list to uppercase.

Explanation: Loop through a list of strings and convert each one to uppercase.

```
str = ["sri","ram","sai","ram"]

for i in str:

   print(i.upper())
```

o/p:

```
 SRI

RAM

SAI

RAM
```

Nested List Extractor

Given two lists containing mixed data types (strings, integers, floats, and nested lists), write a Python program to:

1. Iterate through both lists using a for loop.
2. Identify and extract all elements that are of list type.
3. Store and print all extracted lists in a new list.

□ Expected Concepts Used:

- for loop
- range() and len()
- type() function
- List operations and .append()

```
str = []

a = ["sri",88,88.4,["S","a","j"],[6,7,3,9]]
```

```
b = ["sai",99.0,66,["a","k","l","i"],[9,3,4,5]]


for i in range(0,len(a)):
    if type(a[i]) == list:
        str.append(a[i])
print(str)
for i in range(0,len(b)):
    if type(b[i]) == list:
        str.append(b[i])
print(str)
o/p:   [['S', 'a', 'j'], [6, 7, 3, 9]]
          [['S', 'a', 'j'], [6, 7, 3, 9], ['a', 'k', 'l', 'i'], [9, 3, 4, 5]]
```

1□Print Numbers 1 to 10

Use a for loop to print numbers from 1 to 10.

```
for i in range(1,11):
    print(i)
o/p:      1
             2
             3
             4
             5
             6
             7
             8
             9
             10
```