

5.1.26

Experiment No :- 5
(for loop)

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- 1 Generate Fibonacci series between 0 to 1000. Then find the sum of even valued terms.
- 2 Write a program that loops over a sequence of ~~2~~ elements of a list, tuple, dictionary and set.
- 3 Write a program that find the Fahrenheit for given Celsius from the list.
- 4 Write a program to create an empty list and input a group of numbers into the list, remove the duplicate elements from it and then sort them in ascending order and then display.

Answer:-

```

① a = 0
b = 1
sum = 0
print("Fibonacci series between 0 to 1000 is :-")
for i in range(1000):
    if a > 1000:
        break
    print(a, end = ", ")
    if a + b == 0:
        sum += a
    temp = a
    a = b
    b = temp + b
print("And the sum of all the even terms is :-", sum)

```

Output :-

Fibonacci series between 0 to 1000 is :-

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377,
610, 987,

And the sum of all the even terms is :- 798

2) $l = [1, 2, 3, 4, 5]$

print ("Elements in the list are :-")

for i in l:

 print(i, end = ", ")

t = ("Rajesh Raha", "24CSEAIML025", "24UG010512")

print ("\\n\\n Elements in the tuple are :-")

for i in t:

 print(i, end = ", ")

d = {"Name": "Rajesh Raha", "Roll no.": "24CSEAIML025",
 "Regd no.": "24UG010512"}

print ("\\n\\n Elements in the dictionary are :-")

for i in d:

 print(f"\{i\} : {d[i]}")

s = {1, 2, 3, 4}

print ("\\n\\n Elements in the set are :-")

for i in s:

 print(i, end = ", ")

Output:-

Elements in the list are:-

1, 2, 3, 4, 5,

Elements in the tuple are:-

Rajesh Rana, 24CSEAIML015, 24UG010512,

Elements in the dictionary are:-

Name : Rajesh Rana

Roll no. : 24CSEAIML015

Regd no. : 24UG010512

Elements in the set are:-

1, 2, 3, 4,

$$3 \quad l = [0, 20, 37, 100]$$

for i in l:

$$f = (i * 9/5) + 32$$

print(f " {i} C = {f} F")

Output:-

$$0 \text{ C} = 32.0 \text{ F}$$

$$20 \text{ C} = 68.0 \text{ F}$$

$$37 \text{ C} = 98.6 \text{ F}$$

$$100 \text{ C} = 212.0 \text{ F}$$

4) $l = []$

```
n = int(input("Enter the number of terms to be entered :-"))
for i in range(n):
    l.append(int(input(f"enter {(i+1)}th number :-")))
res = sorted(list(set(l)))
print("After removing the duplicate elements and
      sorting the list :-", res)
```

Output:-

Enter the number of terms to be entered :- 5

Enter 1st number :- 4

Enter 2nd number :- 1

Enter 3rd number :- 1

Enter 4th number :- 4

Enter 5th number :- 2

After removing the duplicate elements and
 sorting the list :- [1, 2, 4]