

Practical No. 7

(Part A)

Aim: - Write Python Program to Print the Fibonacci sequence.

Python Program to Print the Fibonacci sequence

A Fibonacci sequence is the integer sequence of 0, 1, 1, 2, 3, 5, 8....

The first two terms are 0 and 1. All other terms are obtained by adding the preceding two terms.

This means to say the nth term is the sum of (n-1)th and (n-2)th term.

Program to display the Fibonacci sequence up to n-th term

```
nterms = int(input("How many terms? "))

# first two terms
n1, n2 = 0, 1
count = 0

# check if the number of terms is valid
if nterms <= 0:
    print("Please enter a positive integer")
# if there is only one term, return n1
elif nterms == 1:
    print("Fibonacci sequence upto",nterms,":")
    print(n1)
# generate fibonacci sequence
else:
    print("Fibonacci sequence:")
    while count < nterms:
        print(n1)
        nth = n1 + n2
        # update values
        n1 = n2
        n2 = nth
        count += 1
```

Output:

```
How many terms? 7
Fibonacci sequence:
0
1
1
2
3
5
8
```

Practical No. 7**(Part B)**

Aim: - Write Python Program to Add Two Matrices.

Python Program to Add Two Matrices

Program to add two matrices using nested loop

```
X = [[12,7,3],
      [4 ,5,6],
      [7 ,8,9]]
```

```
Y = [[5,8,1],
      [6,7,3],
      [4,5,9]]
```

```
result = [[0,0,0],
           [0,0,0],
           [0,0,0]]
```

```
# iterate through
rows for i in
range(len(X)):
    # iterate through
```

```
        columns for j in
range(len(X[0])):
    result[i][j] = X[i][j] + Y[i][j]

for r in result:
    print(r)
```

Output:

```
[17, 15, 4]
[10, 12, 9]
[11, 13, 18]
```

Result: The practical has been successfully performed & studied.