

National Institute of Technology, Calicut
Department of Computer Science and Engineering
Data Structures lab - CS2094

practice problems

1. write a programe to print the first n Fibonacci numbers.

input:

Enter the value for n

6

output:

0

1

1

2

3

5

Note : n can be in the range 0 to 2^{31} .

If n fibonacci numbers can be correctly outputed, then print those. Otherwise print as many as possible with appropriate error messages.

2. Given an array of n integers, write a program to search whether a particular integer, say k , is present in the array. If present return the index of the same, Otherwise return -1.

input:

Enter the size of the array : 5

Enter values :

1 2 3 4 5

Enter the value to be searched : 4

output:

Index : 3

3. Given two non-negative integers, say m and n , find $\text{GCD}(m,n)$ and $\text{LCM}(m,n)$.

input:

Enter the values of m and n : 3 9

output:

GCD : 3

LCM : 27

4. Calculate the determinant of a square matrix.

input:

Enter the size of the matrix : 3 3

Enter the elements : 1 2 3 1 1 1 2 3 3

output:

Determinant : 1