**PSG COLLEGE OF TECHNOLOGY**

**DEPARTMENT OF COMPUTER APPLICATIONS**

**I MCA**

**23MX16 DATA STRUCTURES LABORATORY**

**Problem Sheet -4**

**Date: 02-09-2023**

1. Sparse matrix is a special matrix with most of its elements are zero. Assume that if (m \* n) / 2 elements are zero then it is a sparse matrix. Write a C program to read elements in a matrix and check whether matrix is Sparse matrix or not.

Example

Input

Input elements in matrix:

1 0 3

0 0 4

6 0 0

Output

The given matrix is Sparse matrix

1. Given a 2-D matrix. Write a program to print its corner elements and the sum of the corner elements.

Input:

6 4 6 9

2 6 1 8

5 5 2 2

4 4 1 3

Output: Corner elements: 6 4 9 3, Corner\_Sum = 22

1. Write a program to check whether two given strings are [anagram](http://en.wikipedia.org/wiki/Anagram) of each other or not. An anagram of a string is another string that contains same characters, only the order of characters can be different. For example, “abcd” and “dabc” are anagram of each other.



1. Given a string, eliminate all “b” and “ac” in the string, you have to replace them in-place, and you are only allowed to iterate over the string once.

Examples:

acbac ==> ""

aaac ==> aa

ababac ==> aa

bbbbd ==> d