LAB 5
Searching

Note: Complete Q1. from the given links and then past the code in Doc file. Complete remaining program as you have done in previous labs.

1. Write a program to implement binary search algorithm. Assume user will enter the sorted array.
   https://www.hackerrank.com/contests/launchpad-1-winter-challenge/challenges/binary-search-basic
2. Write a function which accepts an array of integers along with the size of it. The numbers are arranged in the list in increasing order until a particular index and after that it is arranged in decreasing order. This function should find and return the index position at which the increasing list starts decreasing. Call this function from main function.

Sample Input	Expected Output
1,4,7,8,9,5,4	5

3. Write a program to check whether given Matrix is sparse or not. We say a matrix as sparse when more than 50% of total elements are zero. If matrix is sparse then represent it in triplet form with the help of array data structure. Also print the number of bytes that are saved or wasted when you represent input matrix in the triplet form.

4. Write a time efficient program for finding the element which appears maximum number of times in the array.
   Sample input: 2, 4, 5, 6, 8, 9, 10, 13, 2, 3, 2

   Sample output: 2 [as 2 is coming three times]