Histogram program

**A histogram shows the frequency of occurrence**.

i)Question:

There is a sequence of numbers ( 50 numbers) of integers from 1 to 10 .

Print out the ‘frequency’ of occurrence of each of these numbers

**ii) Using arrays**

1)Perform bubble sorting on a sequence of 50 numbers .

2) Perform bubble sorting on a set of ASCII characters

iii)Using a function, write a program to create a two dimensional matrix representing the Pascal’s triangle.

iv) Write a function that copies a one dimensional array of n elements into a two dimensional array of k rows and j columns. The rows and columns must be valid factors of n .i.e. n=k\*j.

v)Write a program ( let there be functions in it) that fills the right to left diagonal of a square matrix with 0s , the lower right triangle with -1s ,and the upper left triangle with +1s. The size of the matrix should not be less than 6x6 .

vi)Write a program with a function for finding the roots of a quadratic equation . The function must pass pointers .

vi Write a program that reads an NxN square matrix ,and calculates the sum of its elements in individual rows, columns and diagonals. Also print out the largest sum .

vii)Find the reverse of an integer value recursively.

viii) Print all prime numbers less than N, where N is an integer given by the user. Define and use a function prime(x) that checks if a number is prime or not.

ix))Read two square matrices and check whether multiplication of these matrices is commutative or not.

x)Use pointers

1. To Swap two numbers using pointers
2. To find the largest of three numbers using pointers
3. Using pointers count the number of occurrences of an element in an array