Assignment

Question-1

Given an integer K and an array arr[] containing N integers, the task is to find the sum and product of K smallest and K largest fibonacci numbers in the array.
Note: Assume that there are at least K fibonacci numbers in the array.

Input: arr[] = {2, 5, 6, 8, 10, 11}, K = 2
Output:
Sum of K-minimum fibonacci numbers is 7
Product of K-minimum fibonacci numbers is 10
Sum of K-maximum fibonacci numbers is 13
Product of K-maximum fibonacci numbers is 40
Explanation :
{2, 5, 8} are the only fibonacci numbers from the array.
{2, 5} are the 2 smallest and {5, 8} are the 2 largest among them.

Input: arr[] = {3, 2, 12, 13, 5, 19}, K = 3
Output:
Sum of K-minimum fibonacci numbers is 10
Product of K-minimum fibonacci numbers is 30
Sum of K-maximum fibonacci numbers is 21
Product of K-maximum fibonacci numbers is 195

Question-2

Given two arrays A[] and B[] of size N, the task is to count the maximum number of pairs, where each pair contains one from each array, such that A[i] > B[i]. Also the array A can be rearranged any number of times.

Input: A[] = {20, 30, 50}, B[]= {60, 40, 25}
Output: 2
Explanation:
Initially:
A[0] = 20 < B[0] = 60
A[1] = 30 < B[1] = 40
A[2] = 50 > B[2] = 25
Clearly, this arrangement has only 1 value such that A[i] > B[i].
This array A[] when rearranged to {20, 50, 30}:
A[0] = 20 < B[0] = 60
A[1] = 50 > B[1] = 40
A[2] = 30 > B[2] = 25
2 values follow the condition A[i] > B[i] which is the maximum for these set of arrays.