**GREEDY ALGORITHMS**

PROBLEM 5:

5-G-PRODUCT OF ARRAY ELEMENTS-MINIMUM

AIM:

Given two arrays array\_One[] and array\_Two[] of same size N. We need to first rearrange the arrays such that the sum of the product of pairs( 1 element from each) is minimum. That is SUM (A[i] \* B[i]) for all i is minimum.

CODE:

#include<stdio.h>

#include<stdlib.h>

int compare\_asc(const void \*a, const void \*b){

return (\*(int\*)a - \*(int\*)b);

}

int main(){

int n;

scanf("%d",&n);

int array\_One[n], array\_Two[n];

for(int i=0;i<n;i++)

{

scanf("%d", &array\_One[i]);

}

for(int i=0;i<n;i++)

{

scanf("%d", &array\_Two[i]);

}

qsort(array\_One, n, sizeof(int), compare\_asc);

qsort(array\_Two, n, sizeof(int), compare\_asc);

int sum=0;

for(int i =0;i<n; i++){

sum+= array\_One[i] \* array\_Two[n- i- 1];

}

printf("%d\n",sum);

return 0;

}

INPUT AND OUTPUT:

