**GREEDY ALGORITHMS**

PROBLEM 4:

4-G ARRAY SUM MAX PROBLEM

AIM:

Given an array of N integer, we have to maximize the sum of arr[i] \* i, where i is the index of the element (i = 0, 1, 2, ..., N).Write an algorithm based on Greedy technique with a Complexity O(nlogn).

CODE:

#include<stdio.h>

#include<stdlib.h>

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

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

}

int main(){

int n;

scanf("%d",&n);

int arr[n];

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

{

scanf("%d",&arr[i]);

}

qsort(arr, n, sizeof(int), compare);

int sum = 0 ;

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

{

sum += arr[i] \* i;

}

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

return 0;

}

INPUT AND OUTPUT:

