**Name: Rohit Ghosh.**

**Roll Number: 21051420.**

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**Class Assignment**

**Program 4**

**Question:**

Given an array, WAP prints the next greater element (NGE) for every element. The next greater element for an element x is the first greater element on the right side of x in the array. For elements for which no greater element exists, consider the next greater

element as -1.

Sample Input & Output

For the input array [2,5,3,9,7], the next greater elements for each element are as follows.

Element NGE Element NGE

2 5 9 -1

5 9 7 -1

3 9

**Code:**

#include<stdio.h>

#include<stdlib.h>

typedef struct

{

int max,size;

}use;

//We made the structure

int main()

{

use\* e1=(use\*) malloc(sizeof(use\*));

printf("Enter the size of array\n");

scanf("%d",&e1->size);

int arr[e1->size];

printf("Enter the elements of the array\n");

for(int i=0;i<e1->size;i++)

{

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

}

//elements of the array is stored now

int \*ptr=arr;

//pointer created

e1->max=-1;

//this variable finds the next greatest element

printf("\nElement\t\tNGE \n\n");

for(int i=0;i<e1->size;i++)

{

for(int j=i;j<e1->size;j++)

{

e1->max=-1;

if(\*(ptr+i)<\*(ptr+j))

{

e1->max=\*(ptr+j);

break;

}

}

printf(" %d\t\t%d\n",\*(ptr+i),e1->max);

//we got all the desired next greatest elements

}

return 0;

}

**Output:**

