**CSE 206 : LAB 03**

**###### (Testing the knowledge of theory class)**

Dynamically allocate an integer array of size 10. Take input in the array. Then, increase the size of the array by 10, take input in the newly allocated array and print. Then, decrease the size of the same array by 6 and print again.

**######**

Implement a structure for storing the information of students of the following definition :

**struct student{**

**char id[20];**

**char name[20];**

**int marks;**

**float result;**

**};**

Dynamically allocate three variables of the structure. Take input in all of them and pass them to a user-defined function. In your function find out the student with the best result among the three. Also print total mark of the three students.

[**Hint** : Use malloc() to allocate memory just like we have done for array and use call\_by\_reference to pass the structures to the function]

**######**

A LEFT ROTATION on an array of size 'n' is an operation which shifts the array elements by 1 position to the left.

For example if 2 rotations are performed on the array [1,2,3,4,5] the contents after shifting would be like as [3,4,5,1,2]. Your task is to perform the above mentioned task using "CALL-BY-REFERENCE".

You will be given 3 inputs. Integer n which will define the size of the array, integer d indicating number of left shifts and a[n] the given array.

Implement a function named "left\_shift" where you will pass the array a[n], integer n and integer d through **call by reference** and shift accordingly. Print the shifted array in the main function.

**Input :**

5 4

1 2 3 4 5

**Output :**

5 1 2 3 4