**Assignment-2**

**Qus-1 : Write the program for deleting an element from the beginning and from any position.**

**Ans:**

***Algorithm->***

1-> Start.

2-> set j=k.

3-> Repeat step 4 & 5 while j<n.

4-> arr[j] = arr[j+1].

5-> set j = j+1.

6-> set n = n-1.

***Program->***

#include<stdio.h>

int main()

{

int arr[] = {1,2,3,4,5};

int i ,j;

int k = 3;

int n = 5;

printf(“original array \n”);

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

{

printf(“arr[%d]=%d\n”, i, arr[i]);

}

j = k;

while(j<n)

{

arr[j-1] = arr[j];

j = j + 1;

}

n = n - 1;

printf(“The array afete deletetion\n”)

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

{

printf(“arr[%d] = %d”, i, arr[i]);

}

return 0;

}

**Qus-2 : Write the program for printing the array after rotating it k times towards left, where k**

**would be taken as user input.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 |

**Ans:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 2 | 3 | 4 | 5 | 6 | 1 |

n = 1 🡪 number of rotation

***Algorithm:***

1-> Decleard and initialize an arry.

2-> variable n will be denoted the number of times an array should be rotated towards left.

3-> looping through the array and performing the arr[j] = arr[j+1].

4-> the first element of the array will be added to the last of rotated array.

***Program:***

#include<stdio.h>

Int main()

{

// initialize array

Int arr[] = {1, 2, 3 , 4, 5};

//calculate length of array

int length = sizeof (arr)/sizeof(arr[0]);

//determine the number of times an array should be rotated

int n,j,first;

printf(“Enter the number for rotation\n”);

scanf(“%d”, &n);

//rotate given array towards left by n times

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

{

//store the first element of the array

first = arr[0]

for (j = 0; j<length-1; j++)

{

//shift element of array by one

arr[j] = arr[j+1];

}

arr[j] = first;

}

printf(“\n”);

//Display resulting array after rotation

for(i = 0; i<length; i++)

printf(“%d” , arr[i]);

return 0;

}