DATA STRUCTURES AND ALOGRITHM.

BATCH ONE

ASSIGNMENT NO :2

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Question 2

Write the program for printing the array after rotating it k times towards left, where k would be taken as user input.

Assuming the base numbers in arrays be 1.2.3.4.5.

// C++ program to rotate an array by

// d elements

#include <bits/stdc++.h>

Using namespace std;

/\*Function to left Rotate arr[] of

Size n by 1\*/

Void leftRotatebyOne(int arr[], int n)

{

Int temp = arr[0], I;

For (I = 0; I < n – 1; i++)

Arr[i] = arr[I + 1];

Arr[i] = temp;

}

/\*Function to left rotate arr[] of size n by d\*/

Void leftRotate(int arr[], int d, int n)

{

For (int I = 0; I < d; i++)

leftRotatebyOne(arr, n);

}

/\* utility function to print an array \*/

Void printArray(int arr[], int n)

{

For (int I = 0; I < n; i++)

Cout << arr[i] << “ “;

}

/\* Driver program to test above functions \*/

Int main()

{

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

Int n = sizeof(arr) / sizeof(arr[0]);

// Function calling

leftRotate(arr, 2, n);

printArray(arr, n);

return 0;

}

***Output : 3 4 5 1 2.***

Question 1

Write the program for deleting an element from the beginning and from any position.

Assuming the input as 10, 20, 30, 40, 50

The corresponding code in C++

#include<iostream.h>

#include<conio.h>

Void main()

{

Int I,a[5],no,pos;

Clrscr();

Cout<<”Enter Data in Array: “;

For(i=0;i<5;i++)

{

Cin>>a[i];

}

Cout<<”\n\nStored Data in Array: “;

For(i=0;i<5;i++)

{

Cout<<a[i];

}

Cout<<”\n\nEnter poss. Of Element to Delete: “;

Cin>>pos;

If(pos>5)

{

Cout<<”\n\nThis value is out of range: “;

}

Else

{

--pos;

For(i=pos;i<=4;i++)

{

A[i]=a[i+1];

}

Cout<<”\n\nNew Data in Array: “;

For(i=0;i<4;i++)

{

Cout<<a[i];

}

}

Getch();

}

***Output: 10,20,40,50***