#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

int main(){

int choice,i,loc=0,elem,pos,temp,n=50;

int arr[n];

system("cls");

menu : { //Main Menu

printf("\n 1. View All Elements");

printf("\n 2. Insert Element");

printf("\n 3. Insert Element at prefered Index");

printf("\n 4. Delete Last Element");

printf("\n 5. Delete Element from prefered Index");

printf("\n 6. Close The Program");

printf("\n Enter any choice");

scanf("%d",&choice);

switch(choice){

// To View All Elements

case 1 : { system("cls");

if(loc==0)//Checking if array is empty

printf("Array Is Empty");

else {

printf("The Elements Are: \n");

for(i=1; i<=loc; i++)//Diplaying Elements

printf("%d\t",arr[i]);

}

printf("\nPress Any Key to Back to Menu");

getch();

system("cls");

goto menu;

break;

}

case 2 : {

if(loc>n-1){printf("Array Is Full\n");

}

else {

system("cls");//To Insert Elements at first empty index

printf("Enter Number of Elements to Insert\n");

scanf("%d",&temp);

for(i=1; i<=temp; i++){

printf("Enter Element to Insert\n");

scanf("%d",&elem);

arr[++loc]=elem;

system("cls");

printf("Element Inserted Succesfully\n");

}

goto menu;

break;

}

}

case 3: //To Insert Element at a loction

system("cls");

if(loc>n-1){printf("Array Is Full\n");//Checking if Array has space

}

else {

printf("\nEnter Postion to Insert Element");

scanf("%d",&pos);

printf("Enter Element to Insert\n");

scanf("%d",&elem);

for(i=loc; i>=pos; i--)

{

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

}

arr[pos]=elem;

loc++;

printf("Element Inserted");

goto menu;

}

case 4 : { system("cls");

if(loc>0){

loc--;

printf("Last Element deleted");

goto menu;

break;

}

else { printf("Array Is Already Empty");

goto menu;

break;

}

}

case 5 : { system("cls");

if(loc>0){

printf("Enter Index to Delete");

scanf("%d",&pos);

for(i=pos; i<=loc-1; i++)

{

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

}

loc--;

printf("Element deleted");

goto menu;

break;

}

else { printf("Array Is Already Empty");

goto menu;

break;

}

}

case 6 : exit(0);

default : { system("cls");

printf("Invalid Input\n");

goto menu;

break;

}

}

}

return 0;

}