#include<stdio.h>  
#include<conio.h>  
#define MAX 10  
void create();  
void insert();  
void deletion();  
void search();  
void display();  
int a,b[20], n, p, e, f, i, pos;  
void main()  
{  
int ch,g=1;  
do  
{  
printf("\n Main Menu");  
printf("\n 1.Create \n 2.Delete \n 3.Search \n 4.Insert \n 5.Display\n 6.Exit \n");  
printf("\n Enter your Choice");  
scanf("%d", &ch);  
switch(ch)  
{  
case 1:create();  
 break;  
case 2:deletion();  
 break;  
case 3:search();  
 break;  
case 4:insert();  
 break;  
case 5:display();  
 break;  
case 6:exit();  
 break;  
default:printf("\n Enter the correct choice:");  
}  
printf("\n Do u want to continue?Enter 1 to continue.");  
scanf("\n%d", &g);  
}  
while(g==1);  
getch();  
}  
void create()  
{  
printf("\n Enter the number of nodes");  
scanf("%d", &n);  
for(i=0;i<n;i++)  
{  
printf("\n Enter the  Element:",i+1);  
scanf("%d", &b[i]);  
}

}  
void deletion()  
{  
printf("\n Enter the position u want to delete::");  
scanf("%d", &pos);  
if(pos>=n)  
{printf("\n Invalid Location::");}  
else  
{  
for(i=pos+1;i<n;i++)  
{b[i-1]=b[i];}  
n--;  
}  
printf("\n The Elements after deletion");  
for(i=0;i<n;i++)  
{  
printf("\t%d", b[i]);  
}

}  
void search()  
{  
printf("\n Enter the Element to be searched:");  
scanf("%d", &e);  
for(i=0;i<n;i++)  
{  
if(b[i]==e)  
{printf("Value is in the %d Position", i);}  
else  
{printf("Value %d is not in the list::", e);continue;}  
}

}  
void insert()  
{  
printf("\n Enter the position u need to insert::");  
scanf("%d", &pos);  
if(pos>=n)  
 { printf("\n invalid Location::"); }  
 else  
 {  
 for(i=MAX-1;i>=pos-1;i--)  
 { b[i+1]=b[i]; }  
 printf("\n Enter the element to insert::\n");  
 scanf("%d",&p);  
 b[pos]=p;  
 n++;  
 }  
 printf("\n The list after insertion::\n");  
display();  
}  
void display()  
{  
printf("\n The Elements of The list ADT are:");  
for(i=0;i<n;i++)  
{  
printf("\n\n%d", b[i]);  
}}