#include <stdio.h>

#include <conio.h>

int empty(int);

void makeempty(int \*) ;

int create (int a[],int \*);

void insert(int a[],int \*,int);

int find(int a[],int \*,int,int \*);

void displaylist(int a[],int \*) ;

void deleteitem(int a[],int \*,int) ;

int kelement (int a[],int);

void main()

{

int ch,item,pos,l,n=-1,a[100],start ;

clrscr();

do

{

printf("\n\n Enter 1 to create list \n Enter 2 to insert an element \n Enter 3 to find an element \n Enter 4 to display list \n Enter 5 to delete an element \n Enter 6 to find kth element \n Enter 7 to make the list empty \n Enter 8 to exit\n") ;

scanf("%d",&ch);

switch (ch)

{

case 1: n=create(a,&n);

break;

case 2: printf("Enter Element ");

scanf("%d",&item) ;

insert(a,&n,item);

break;

case 3: start=0 ;

printf("Enter element to be found ");

scanf("%d",&item);

while(1)

{

l=find(a,&n,item,&start);

if (l==-1)

{

printf("\nEnd of Search") ;

break ;

}

else

printf("\nFound at %d",l+1);

}

break;

case 4: displaylist(a,&n);

break;

case 5: printf("Enter element to be deleted ");

scanf("%d",&item);

deleteitem(a,&n,item);

break;

case 6: printf("Enter position ");

scanf("%d",&pos);

l=kelement(a,pos);

printf("Element at given position = %d",l);

break ;

case 7: makeempty(&n);

}

}while(ch!=8);

}

int isempty(int \*n)

{

if (\*n==-1)

return 1;

else

return 0;

}

void makeempty(int \*n)

{

\*n=-1 ;

}

int create (int a[],int \*n)

{

int i=1 ;

if (\*n!=-1)

{

printf("\nCareful!!! Data will be Overwritten.....Enter 0 to Cancel ");

scanf("%d",&i) ;

}

if(i==1)

{

printf("\nEnter the number of Elements ");

scanf("%d",n);

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

{

printf("Enter Element no %d : ",i+1);

scanf("%d",&a[i]) ;

}

}

return \*n ;

}

void insert(int a[],int \*n,int item)

{

\*n=\*n+1 ;

a[\*n-1]=item;

}

void displaylist(int a[],int \*n)

{

int i;

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

printf("%d ",a[i]);

}

void deleteitem (int a[],int \*n,int item)

{

int i,j,x;

printf("\nEnter 1 to delete only First entry or Other Value to delete all ");

scanf("%d",&x) ;

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

if(a[i]==item)

{

printf("\nItem Deleted at Position %d",i+1) ;

for(j=i;j<(\*n)-1;j++)

a[j]=a[j+1];

\*n=\*n-1 ;

i--;

if(x==1)

break;

}

}

int find (int a[],int \*n,int item,int \*start)

{

int i;

for (i=\*start;i<\*n;i++)

if(a[i]==item)

{

\*start=i+1;

return i;

}

return -1 ;

}

int kelement (int a[],int pos)

{

return a[pos-1] ;

}