#include <stdio.h>

void deletion();

void insertion();

void traversal();

void search();

void concatenation();

void reversal();

void intersection();

void traversal(int ar[],int n)

{

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

{

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

}

printf("\n");

}

void insertion(int ar[],int n)

{

int i,key,pos;

printf("enter element to be inserted and position in which it is inserted");

scanf("%d%d",&key,&pos);

if(ar[i]!=0)

{

printf("araay is full insertion not possible\n");

}

else

{

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

ar[i]=ar[i-1];

ar[pos]=key;

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

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

}

}

void search(int ar[],int n)

{

int i=0,key,found=0,pos=-1;

printf("enter element to search\n");

scanf("%d",&key);

while((i<n)&&(found==0))

{

if(ar[i]==key)

{

found=1;

pos=i;

break;

}

else

i++;

}

if(found==0)

printf("element not found\n");

else

printf("element found at %d\n",pos);

}

void deletion(int ar[],int n)

{

int i=0,found=0,key,pos;

printf("enter locaton of element to delete");

scanf("%d",&pos);

while(i<n && found==0)

{

if(i==pos)

{

found=1;

n=n-1;

break;

}

else

{

i++;

}

}

if(found==0)

{

printf("element not found, deletion not possible");

return;

}

else

{

while(i<=n)

{

ar[i]=ar[i+1];

i++;

}

}

traversal(ar,n);

}

void concatenation(int ar[],int n)

{

int i,x,z,j=0;

printf("enter size of 2nd array\n");

scanf("%d",&x);

int c[x];

printf("enter element of 2nd array\n");

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

{

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

}

z=x+n;

int b[z];

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

{

b[i]=ar[i];

}

for(;i<z;i++)

{

b[i]=c[j];

j++;

}

traversal(b,z);

}

void reversal(int ar[],int n)

{

int i,b[n];

int u=n;

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

{

b[i]=ar[n-1];

n--;

}

traversal(b,u);

}

void intersection(int ar[],int n)

{

int i,x,j,k=0;

printf("enter size of 2nd array\n");

scanf("%d",&x);

int c[x],b[x+n];

printf("enter element of 2nd array\n");

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

{

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

}

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

{

for(j=0;j<x;j++)

{

if(ar[i]==c[j])

{

b[k]=ar[i];

k++;

}

}

}

traversal(b,k);

}

int main()

{

int ar[50],i,n,ch;

for(i=0;i<50;i++)

{

ar[i]=0;

}

printf("enter size of array\n");

scanf("%d",&n);

printf("enter integer elements\n");

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

{

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

}

printf("1.traversal\n2.insertion\n3.search\n4.deletion\n5.concatenation\n6.reversal\n7.intersection\n");

printf("enter your choice\n");

scanf("%d",&ch);

switch(ch)

{

case 1:

traversal(ar,n);

break;

case 2:

insertion(ar,n);

break;

case 3:

search(ar,n);

break;

case 4:

deletion(ar,n);

break;

case 5:

concatenation(ar,n);

break;

case 6:

reversal(ar,n);

break;

case 7:

intersection(ar,n);

break;

default:

printf("wrong choice\n");

}

return 0;

}