/\*array traversal,insertion,deletion,searching,reversal\*/

#include<stdio.h>

void traversal(int a1[],int n);

void search(int a1[],int n);

void reversal(int a1[],int n);

void insertion(int a1[],int n);

void deletion(int copy[],int n);

int main()

{

int n,i;

printf("enter the value of n\n");

scanf("%d",&n);

int a[n],copy[n];

printf("enter the values of array\n");

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

{

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

}

printf("your entered array elements are\n");

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

{

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

}

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

{

copy[i]=a[i];

}

traversal(a,n);

search(a,n);

reversal(a,n);

insertion(a,n);

deletion(copy,n);

return 0;

}

void traversal(int a1[],int n)

{

int i;

printf(" after traversal array elements are\n");

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

{

printf("%d\n",a1[i]);

}

}

void search(int a1[],int n)

{

int i,key,found,location;

printf("enter your key(search)element\n");

scanf("%d",&key);

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

{

if(a1[i]==key)

{

found=1;

location=i;

break;

}

else

{

found=0;

}

}

if(found==0)

printf("SEARCH UNSUCCESSFUL:element not found\n");

else

printf("SEARCH SUCCESSFUL:%d is present at place %d\n",key,(location+1));

}

void reversal(int a1[],int n)

{

int i;

printf("after reversing array the array is\n");

for(i=n-1;i>=0;i--)

{

printf("%d\n",a1[i]);

}

}

void insertion(int a1[],int n)

{

int i,key,location;

printf("enter the location of new element to be inserted\n");

scanf("%d",&location);

printf("enter the value of new element to be inserted\n");

scanf("%d",&key);

n++;

i=n-1;

while(i>=location)

{

a1[i]=a1[i-1];

i--;

}

a1[location]=key;

printf("after insertion array is\n");

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

{

printf("%d\n",a1[i]);

}

}

void deletion(int copy[],int n)

{

int i,key,location,found;

printf("enter the value of element to be deleted\n");

scanf("%d",&key);

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

{

if(copy[i]==key)

{

found=1;

location=i;

break;

}

else

{

found=0;

}

}

if(found==0)

printf("SEARCH UNSUCCESSFUL:element not found,deletion is not possible\n");

else

while(location<n)

{

copy[location]=copy[location+1];

location++;

}

printf("after deletion the array is\n");

for(i=0;i<n-1;i++)

{

printf("%d\n",copy[i]);

}

}