**Question 4**

#include<stdio.h>

int NUMBER\_ARRAY[5],n,i;

void insert()

{

int location,value;

printf(" which the location where you want to insert an new element\n");

scanf("%d", &location);

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

scanf("%d", &value);

location--;

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

{

NUMBER\_ARRAY[i+1]=NUMBER\_ARRAY[i];

}

NUMBER\_ARRAY[location]=value;

printf("List after Insertion: ");

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

{

printf("%d ",NUMBER\_ARRAY[i]);

}

}

void del()//Deleting

{

int number,j;

printf("\nEnter an element to delete\n");

scanf("%d",&number);

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

{

if(NUMBER\_ARRAY[i]==number)

{

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

{

NUMBER\_ARRAY[j]=NUMBER\_ARRAY[j+1];

}

break;

}

}

printf("List after deletion\n");

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

{

printf("%d ",NUMBER\_ARRAY[i]);

}

}

void search()

{

int search,flag=0;

printf("Enter number to be searched:\n");

scanf("%d",&search);

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

{

if(NUMBER\_ARRAY[i]==search)

{

flag = 1;

break;

}

}

if(flag==1)

{

printf("%d is found at %d position",search,i+1);

}

else

{

printf("%d is not found",search);

}

}

void sort()

{

int temp,j;

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

{

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

{

if(NUMBER\_ARRAY[j]>NUMBER\_ARRAY[j+1])

{

temp = NUMBER\_ARRAY[j];

NUMBER\_ARRAY[j] = NUMBER\_ARRAY[j+1];

NUMBER\_ARRAY[j+1] = temp;

}

}

}

}

int menu()

{

printf("\n++++++++++++++++++++++++++++++++++++++++++++++++++++++++++\n");

printf("\n|\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*|\n");

printf("\n|\*\*\*\*\*\*\*\*\*\*\*\* Menu Driven Program \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*|\n");

printf("\n|\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*|\n");

printf("\n++++++++++++++++++++++++++++++++++++++++++++++++++++++++++\n");

int choice;

printf("\n 1->search element\n2->sort element\n3->insert an element\n4->delete the array elements\n Enter your choice:");

scanf("%d",&choice);

return choice;

}

void display()

{

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

{

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

}

}

void main()

{

int ch;

printf("Enter the size of the array:");

scanf("%d",&n);

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

{

printf("Enter a[%d] elements of an array:\n",i+1);

scanf("%d",&NUMBER\_ARRAY[i]);

}

for(ch = menu();ch != 5;ch= menu())

{

switch(ch)

{

case 1:search();

break;

case 2:sort();

printf("Sorted array:");

display();

break;

case 3:insert();

break;

case 4:del();

break;

default:printf("Wrong Choice:");

break;

}

}

}

Output:

