

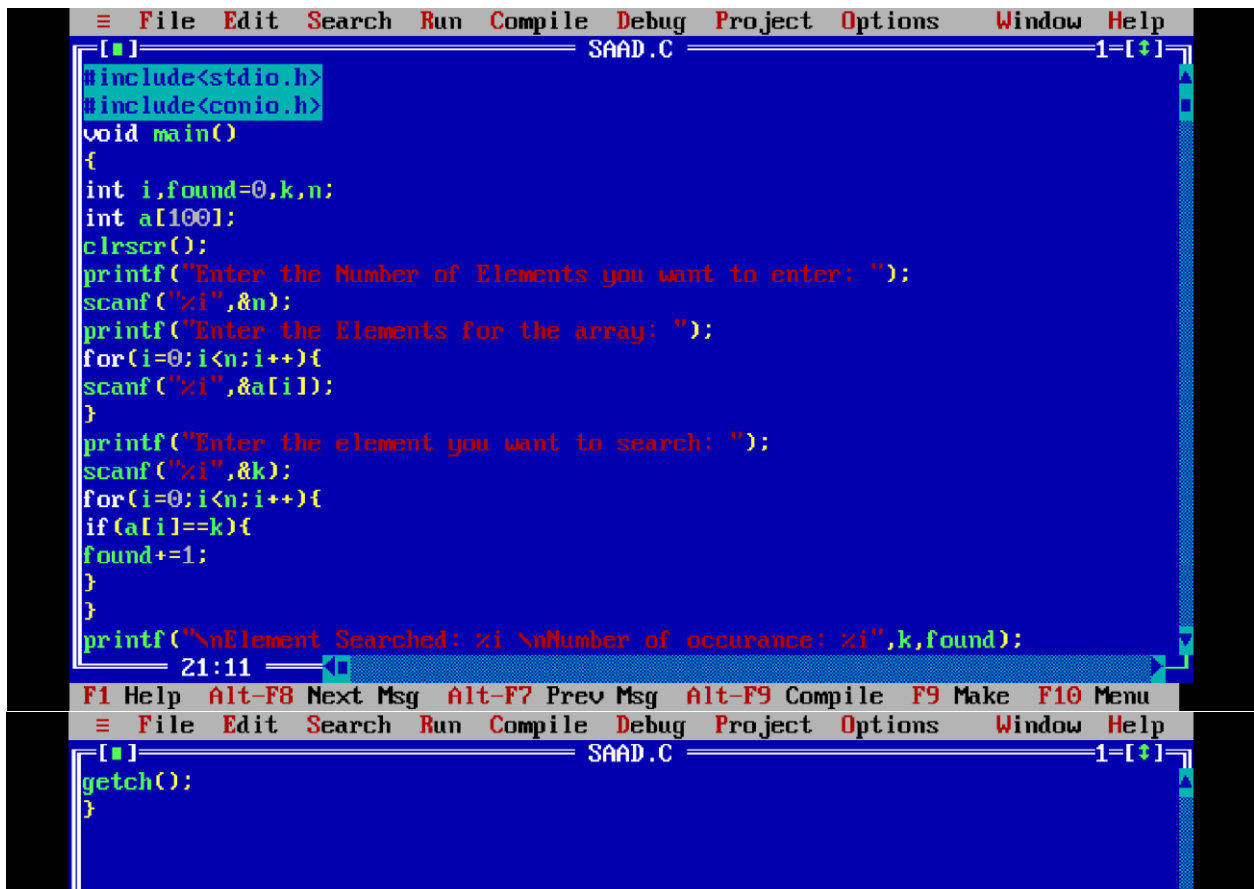
Subject: - DSU		Subject Code: 313301
Semester: - III		Course: Computer Engineering
Laboratory No: L003		Name of Subject Teacher: Prof. Imran S.
Name of Student: Mohd Saad Khan		Roll Id: - 24203A0007
Experiment No:	2	
Title of Experiment	Write a 'C' Program to Search a particular data from the given Array of numbers using: Linear Search Method.	

Aim: Write a 'C' Program to Search a particular data from the given Array of numbers using: Linear Search Method.

Algorithm:

- Step 1: Start
- Step 2: Declare Variables i, found, k, n, and an array a[100]
- Step 3: Print "Enter the number of Element"
- Step 4: Scan the value of n from the keyboard
- Step 5: Print "Enter the element for an array"
- Step 6: Run a loop, such that $i=0; i<n; i++$. Scan the input in every iteration
- Step 7: Print "Enter the element you want to search"
- Step 8: Scan the value of k from the keyboard
- Step 9: Run a loop, such that $i=0; i<n; i++$
- Step 10: Compare, if $a[i]==k$, then increment the value of 'found' Variable by 1
- Step 11: If condition is false then repeat the steps 9 & 10 again until the condition inside the loop becomes false
- Step 12: Print the searched element and its number of occurrence
- Step 13: Stop

Code:



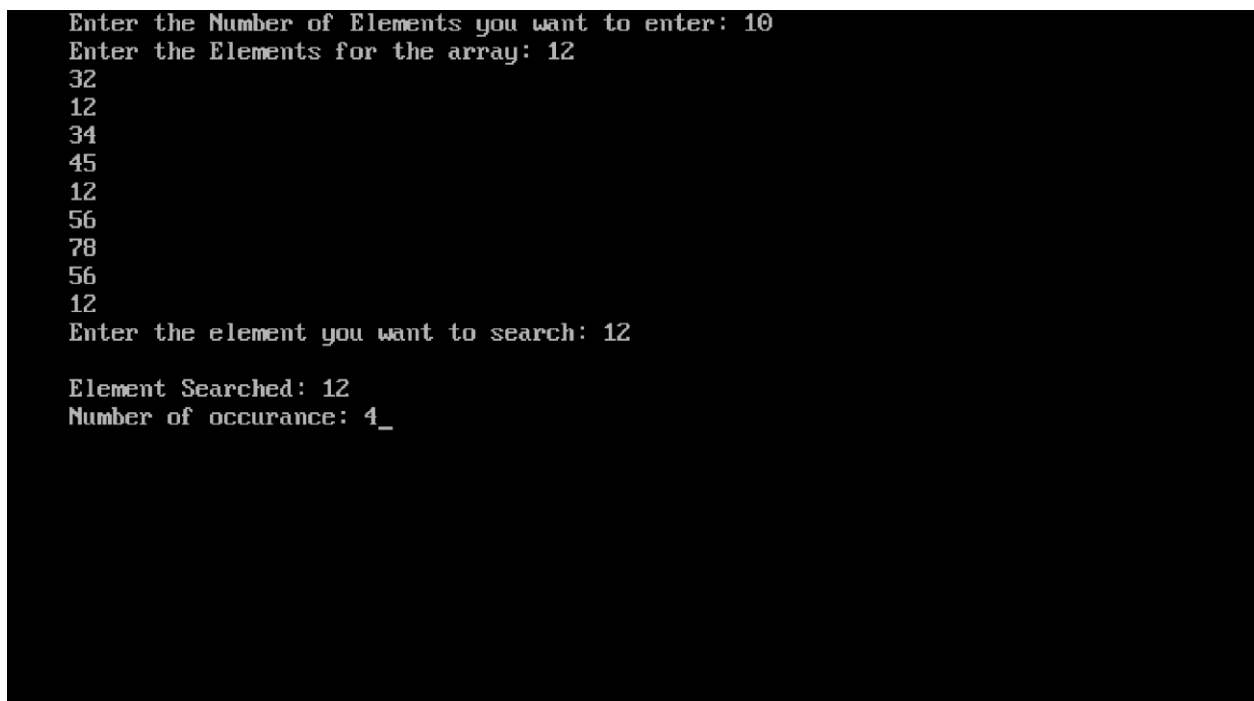
```
File Edit Search Run Compile Debug Project Options Window Help
SAAD.C 1-[+]
```

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int i,found=0,k,n;
    int a[100];
    clrscr();
    printf("Enter the Number of Elements you want to enter: ");
    scanf("%i",&n);
    printf("Enter the Elements for the array: ");
    for(i=0;i<n;i++){
        scanf("%i",&a[i]);
    }
    printf("Enter the element you want to search: ");
    scanf("%i",&k);
    for(i=0;i<n;i++){
        if(a[i]==k){
            found+=1;
        }
    }
    printf("\nElement Searched: %i \nNumber of occurance: %i",k,found);
    21:11
```

```
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu
File Edit Search Run Compile Debug Project Options Window Help
SAAD.C 1-[+]
```

```
getch();
}
```

Output: -



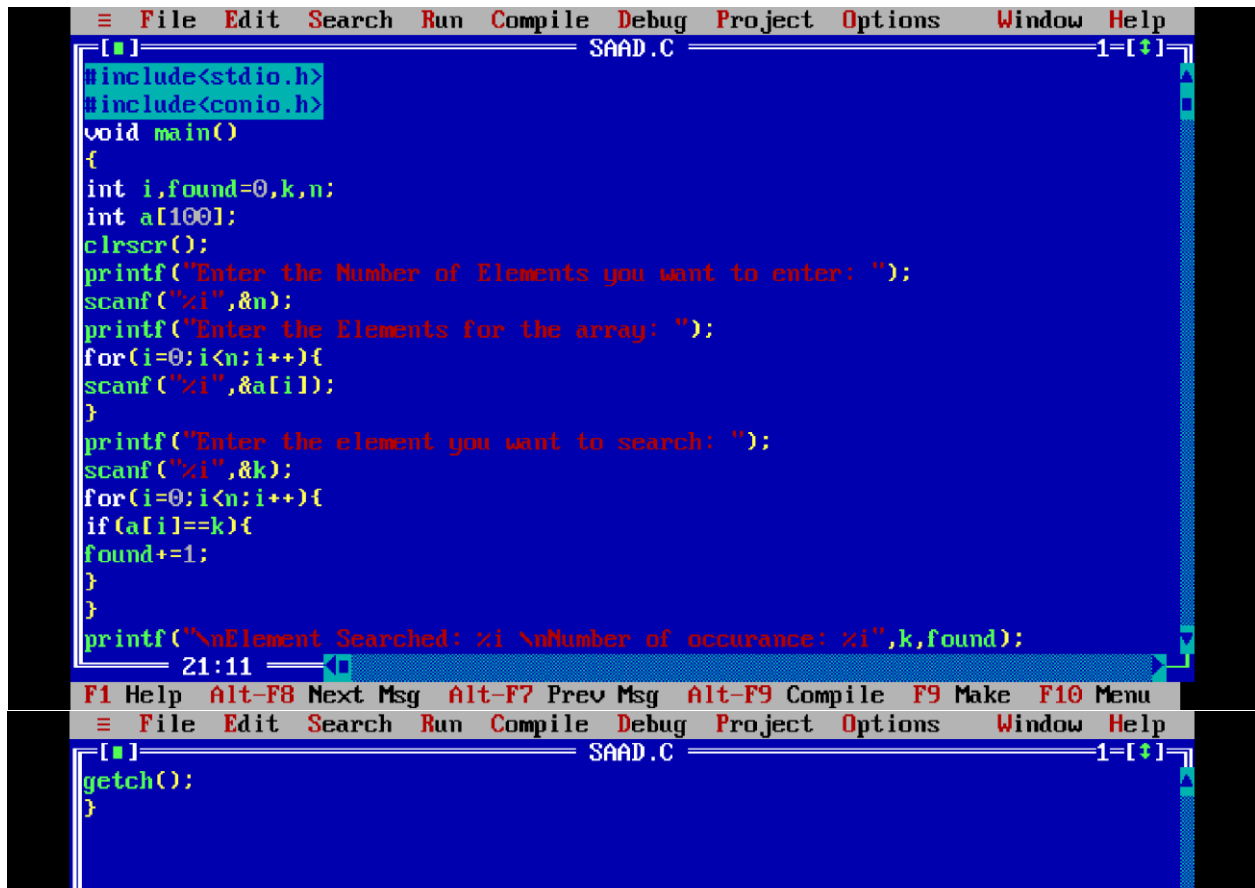
```
Enter the Number of Elements you want to enter: 10
Enter the Elements for the array: 12
32
12
34
45
12
56
78
56
12
Enter the element you want to search: 12

Element Searched: 12
Number of occurance: 4_
```

Practical Related Questions:

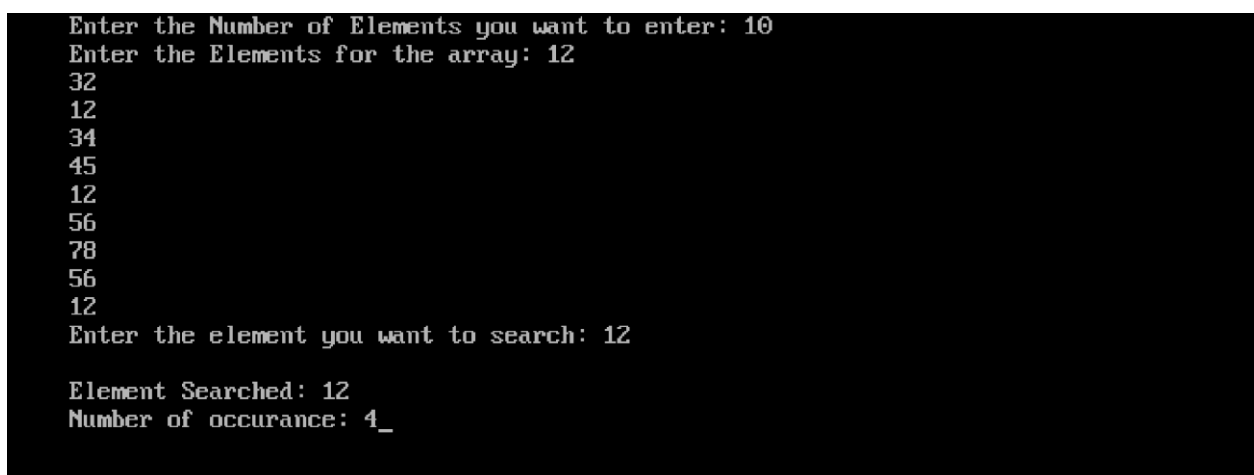
1. Modify the linear search program to find and print all occurrences of the target value in the array.

Ans:



```
File Edit Search Run Compile Debug Project Options Window Help
SAAD.C
#include<stdio.h>
#include<conio.h>
void main()
{
    int i,found=0,k,n;
    int a[100];
    clrscr();
    printf("Enter the Number of Elements you want to enter: ");
    scanf("%i",&n);
    printf("Enter the Elements for the array: ");
    for(i=0;i<n;i++){
        scanf("%i",&a[i]);
    }
    printf("Enter the element you want to search: ");
    scanf("%i",&k);
    for(i=0;i<n;i++){
        if(a[i]==k){
            found+=1;
        }
    }
    printf("\nElement Searched: %i \nNumber of occurance: %i",k,found);
}
Z1:11
F1 Help Alt-F8 Next Msg Alt-F7 Prev Msg Alt-F9 Compile F9 Make F10 Menu
File Edit Search Run Compile Debug Project Options Window Help
SAAD.C
getch();
}
```

Output:



```
Enter the Number of Elements you want to enter: 10
Enter the Elements for the array: 12
32
12
34
45
12
56
78
56
12
Enter the element you want to search: 12

Element Searched: 12
Number of occurance: 4_
```

Marks Obtained			Dated signature of Teacher
Process Related (35)	Product Related (15)	Total (50)	