

AIM : Write a C++ program for Binary Search.

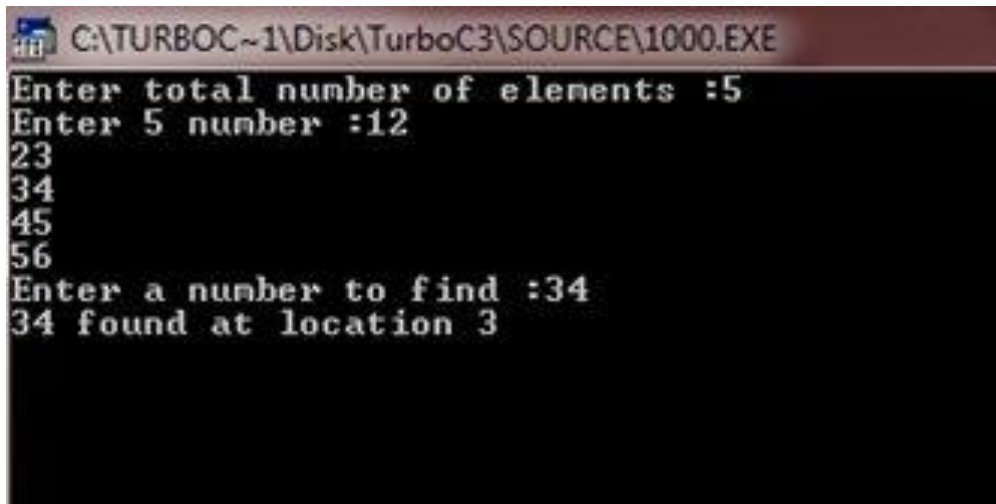
CODING :

```
#include<iostream.h>
#include<conio.h>
void main()
{
    clrscr();
    int n, i, arr[50], search, first, last, middle;
    cout<<"Enter total number of elements :";
    cin>>n;
    cout<<"Enter "<<n<<" number :";
    for (i=0; i<n; i++)
    {
        cin>>arr[i];
    }
    cout<<"Enter a number to find :";
    cin>>search;
    first = 0;
    last = n-1;
    middle = (first+last)/2;
    while (first <= last)
    {
        if(arr[middle] < search)
        {
            first = middle + 1;
        }
        else if(arr[middle] == search)
        {
            cout<<search<<" found at location "<<middle+1<<"\n";
            break;
        }
        else
        {

```

```
        last = middle - 1;
    }
    middle = (first + last)/2;
}
if(first > last)
{
    cout<<"Not found! "<<search<<" is not present in the list.";
}
getch();
}
```

OUTPUT :



The screenshot shows a Turbo C++ console window with the title bar "C:\TURBOC~1\Disk\TurboC3\SOURCE\1000.EXE". The program prompts the user to enter the total number of elements (5) and then 5 numbers (12, 23, 34, 45, 56). It then prompts for a number to find (34) and outputs "34 found at location 3".

```
C:\TURBOC~1\Disk\TurboC3\SOURCE\1000.EXE
Enter total number of elements :5
Enter 5 number :12
23
34
45
56
Enter a number to find :34
34 found at location 3
```