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//Write a program for searching element from given array using binary search.

```
#include<iostream>
using namespace std;
class BinarySearch
{
private:
    int a[20],n,r;
public:
    int binary(int a[],int n,int val);
    void get();
    void show(int r);
};

int BinarySearch::binary(int a[],int n,int val)
{
    int first = 0;
    int last = n-1;
    int mid;
    while(first <= last)
    {
        mid = (first + last)/2;
        if (a[mid]==val)
            return mid+1;
        else if (val>a[mid])
            first = mid + 1;
        else
            last = mid - 1;
    }
    return 0;
}

void BinarySearch::show(int r)
{
    if(r == 0)
    {
        cout<<"element not found.";
    }
    else
    {
        cout<<"element found at position : "<<r;
    }
}

void BinarySearch::get()
{
    int no;
```

```

    cout<<"Enter no. of elements :";
    cin>>n;
    cout<<"Enter only sorted element : ";
    for (int i =0;i<n;i++)
    {
        cin>>a[i];
    }
    cout<<"Enter element to search : ";
    cin>>no;
    int result = binary(a,n,no);
    show(result);
}
int main()
{
    BinarySearch obj;
    obj.get();
    return 0;
}

```

Output:

Enter no. of elements :5

Enter only sorted element : 12

23

36

65

78

Enter element to search : 36

element found at position : 3