

BINARY SEARCH

```
#include <stdio.h>
#include <stdlib.h>
void BinarySearch(int arr[],int num,int first,int last)
{
    int mid;
    if(first > last)
    {
        printf("Cannot Find The Number");
    }
    else
    {
        mid = (first + last)/2;
        if(arr[mid]==num)
        {
            printf("Element Is At The Index: %d ",mid);
            exit(0);
        }
        else if(arr[mid] > num)
        {
            BinarySearch(arr, num, first, mid-1);
        }
        else
        {
            BinarySearch(arr, num, mid+1, last);
        }
    }
}

void main()
{
    int arr[50],beg,mid,end,i,n,num;
    printf("Enter The Size Of The Given Array: ");
    scanf("%d",&n);
    printf("Enter The Values In Sorted Sequence \n");
    for(i=0;i<n;i++)
    {
        scanf("%d",&arr[i]);
    }
    beg=0;
    end=n-1;
    printf("Enter The Value To Search Using Binary Search: ");
    scanf("%d",&num);
    BinarySearch(arr,num,beg,end);
}
```