

Program:

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Pract 4 > C bs.c > main(void)
1  #include <stdio.h>
2  int binaryScr(int a[],int low, int high, int m)
3  {
4      if (high >=low){
5          int mid = low+(high-low)/2;
6          if (a[mid]==m)
7              return mid;
8          if(a[mid]>m)
9              return binaryScr(a,low,mid-1,m);
10         return binaryScr(a,mid+1,high,m);
11     }
12     return -1;
13 }
14 int main(void){
15     int a[]={12,13,21,36,40};
16     int i,m;
17     for(i=0;i<5;i++){
18         printf("%d ",a[i]);
19     }
20     printf("\n");
21     int n=sizeof(a)/sizeof(a[0]);
22     printf("Enter the number to be searched\n");
23     scanf("%d",&m);
24     int result=binaryScr(a,0,n-1,m);
25     (result==-1)?printf("The element is not present"):
26     printf("The element is present at index %d",result);
27     return 0;
28 }
```

Output:

```
PS D:\TYCSBS\Devansh Upadhyay 53\Pract 4> gcc bs.c
PS D:\TYCSBS\Devansh Upadhyay 53\Pract 4> ./a.exe
12 13 21 36 40
Enter the number to be searched
36
The element is present at index 3
```