

```
1  #include <stdio.h>
2
3  int binarysearch(int arr[], int length, int eliment)
4  {
5      int low, mid, high;
6      low = 0;
7      high = length - 1;
8
9      while (low <= high)
10     {
11         mid = (low + high) / 2;
12         if (arr[mid] == eliment)
13         {
14             return mid;
15         }
16         if (arr[mid] > eliment)
17         {
18             high = mid - 1;
19         }
20     else
21     {
22         low = mid + 1;
23     }
24 }
25 return -1;
26 }
27
28 int main()
29 {
30     int arr[] = {1, 2, 3, 4, 5, 6, 7, 8, 9};
31     int length = sizeof(arr) / sizeof(int);
32     int eliment = 6;
33     int ansindex = binarysearch(arr, length, eliment);
34     if (ansindex == -1)
35     {
36         printf("no data found !");
37     }
38     else
39     {
40         printf("the eliment %d found at index %d \n ", eliment, ansindex);
41     }
42
43     return 0;
44 }
```

the eliment 6 found at index 5

```
#include <stdio.h>
```

```
int binarysearch(int arr[], int length, int  
eliment)
```

```
{
```

```
    int low, mid, high;
```

```
    low = 0;
```

```
    high = length - 1;
```

```
    while (low <= high)
```

```
    {
```

```
        mid = (low + high) / 2;
```

```
        if (arr[mid] == eliment)
```

```
        {
```

```
            return mid;
```

```
        }
```

```
        if (arr[mid] > eliment)
```

```
        {
```

```
            high = mid - 1;
```

```
        }
```

```
    else
```

```
    {
```

```
        low = mid + 1;
```

```
    }
```

```
}
```

```
    return -1;
```

```
}
```

```
int main()
```

```
{
```

```
    int arr[] = {1, 2, 3, 4, 5, 6, 7, 8, 9};
```

```
    int length = sizeof(arr) / sizeof(int);
```

```
    int eliment = 6;
```

```
    int ansindex = binarysearch(arr, length,  
eliment);
```

```
    if (ansindex == -1)
```

```
    {
```

```
        printf("no data found !");
```

```
    }
```

```
    else
```

```
    {
```

```
        printf("the eliment %d found at index %d  
\n ", eliment, ansindex);
```

```
    }
```

```
    return 0;
```

```
}
```