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200801168@rajalakshmi.edu.in

NPTEL (https://swayam.gov.in/explorer?ncCode=NPTEL) » Problem Solving Through Programming In C (course)

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Course outline

- How does an NPTEL online course work? ()
- Week 0 : ()
- Week 1 ()
- Week 2 ()
- Week 3 ()
- Week 4 ()
- Week 5 ()

Week 9 : Programming Assignment 3

Due on 2023-09-28, 23:59 IST

Write a C program to search a given number from a sorted 1D array and display the position at which it is found using binary search algorithm. The index location starts from 1.

Your last recorded submission was on 2023-09-25, 22:01 IST

Select the Language for this assignment. C

```c
#include <stdio.h>
int main()
{
 int c, n, search,
 array[100];
 scanf("%d",&n); //number of elements in the array

 for (c = 0; c < n; c++)
 scanf("%d",&array[c]);

 scanf("%d", &search); //The element to search is read from test case.

/* Use the printf statements as below:
 printf("%d found at location %d.", search, variable_name);
 printf("Not found! %d isn't present in the list.", search);
*/
int f,l,m;
f=0;
l=n-1;
m=(f+l)/2;
while(f<=l)
{
  if(array[m]<search)
    f=m+1;
  else if(array[m]==search)
  {
    printf("%d found at location %d.",search,m+1);
    break;
  }
  else
    l=m-1;
  m=(f+l)/2;
}
if(f>l)
```

```
35   printf("Not found! %d isn't present in the list.",search);
36 return 0;
37 }
```

You may submit any number of times before the due date. The final submission will be considered for grading.

This assignment has Public Test cases. Please click on "Compile & Run" button to see the status of Public test cases. Assignment will be evaluated only after submitting using Submit button below. If you only save as or compile and run the Program , your assignment will not be graded and you will not see your score after the deadline.

Save as Draft | Compile & Run | Submit | Reset

Sample Test Cases

	Input	Output
Test Case 1	5 10 20 30 40 50 40	40 found at location 4.
Test Case 2	4 44 55 66 77 10	Not found! 10 isn't present in the list.