

```
#include <stdio.h>
void binary_search(int [], int, int, int);
int main()
{
    int key, size, i;
    int list[25];
    printf("Enter size of a list: ");
    scanf("%d", &size);
    printf("Enter elements\n");
    for(i = 0; i < size; i++)
    {
        scanf("%d", &list[i]);
    }
    printf("\n");
    printf("Enter key to search\n");
    scanf("%d", &key);
    binary_search(list, 0, size, key);
}

void binary_search(int list[], int lo, int hi, int key)
{
    int mid;
    if (lo > hi)
    {
        printf("Key not found\n");
        return;
    }
    mid = (lo + hi) / 2;
    if (list[mid] == key)
    {
        printf("Key found\n");
    }
    else if (list[mid] > key)
    {
        binary_search(list, lo, mid - 1, key);
    }
    else if (list[mid] < key)
    {
        binary_search(list, mid + 1, hi, key);
    }
}
```

Enter size of a list: 4

Enter elements

22

33

44

55

Enter key to search

44

Key found

Process returned 0 (0x0) execution time : 83.628 s

Press any key to continue.