

Binary Search By Divide and Conquer

```
#include <stdio.h>

int bSearch(int arr[], int N, int x);

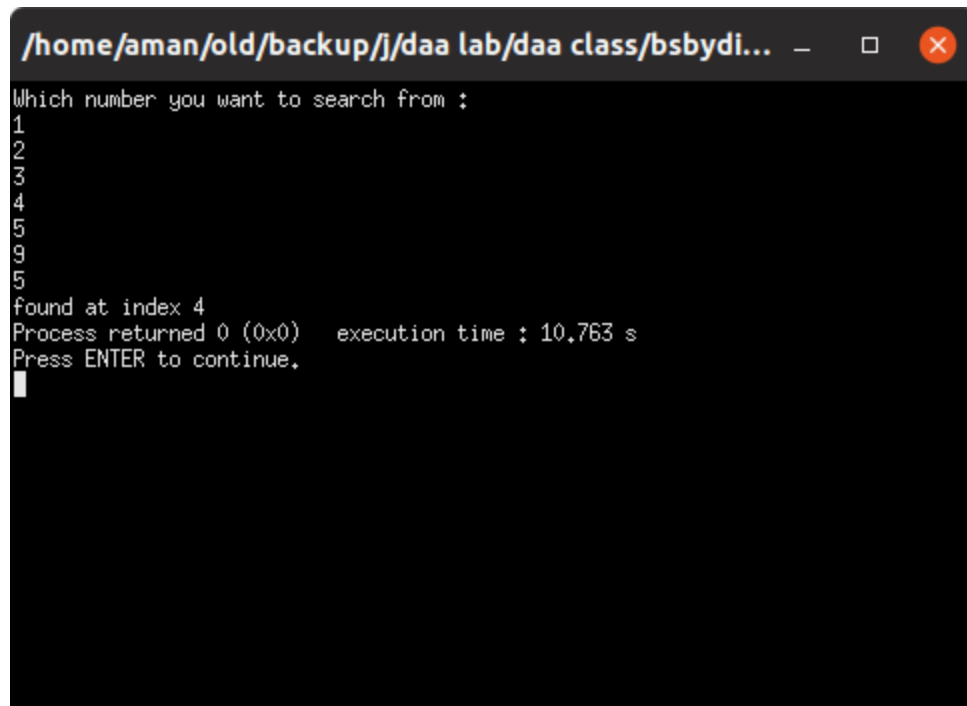
int main()
{
    int num, index;
    int arr[] = { 1, 2, 3, 4, 5, 9 };
    printf("Which number you want to search from : \n1\n2\n3\n4\n5\n9\n");
    scanf("%d", &num);

    int n = sizeof(arr)/sizeof(arr[0]);
    index = bSearch(arr, n, num);

    if (index != -1)
        printf("found at index %d", index);
    else
        printf("not found");

    return 0;
}

int bSearch(int arr[], int N, int x)
{
    int first = 0, last = N - 1;
    while (first <= last)
    {
        int mid = (first + last)/2;
        if (x == arr[mid])
            return mid;
        else if (x < arr[mid])
            last = mid - 1;
        else
            first = mid + 1;
    }
    return -1;
}
```



```
/home/aman/old/backup/fj/daa lab/daa class/bsbydi...  _  □  ×

Which number you want to search from :
1
2
3
4
5
9
5
found at index 4
Process returned 0 (0x0)   execution time : 10.763 s
Press ENTER to continue.
█
```