

```
#include<stdio.h>

int binary_search(int arr[], int l, int r, int x)
{
    if(r>=l)
    {
        int mid=l+(r-l)/2;

        if(arr[mid]==x) return mid;

        if(arr[mid]>x) return binary_search(arr, l, mid-1, x);
        else return binary_search(arr, mid+1, r, x);
    }
    return -1;
}

int main()
{
    int arr[]={2,3,4,10,40};
    int n=sizeof(arr)/sizeof(arr[0]);
    int x=10;

    int result=binary_search(arr,0,n-1,x);

    if(result==-1) printf("Element is not found\n");
    else printf("Element is found in position %d\n",result);

    return 0;
}
```