|  |
| --- |
| #include<stdio.h> |
|  | int main() { |
|  |  |
|  | int n, a[30], item, i, j, mid, top, bottom; |
|  | printf("Enter how many elements you want:\n"); |
|  | scanf("%d", &n); |
|  | printf("Enter the %d elements in ascending order\n", n); |
|  | for (i = 0; i < n; i++) { |
|  | scanf("%d", &a[i]); |
|  | } |
|  | printf("\nEnter the item to search\n"); |
|  | scanf("%d", &item); |
|  | bottom = 1; |
|  | top = n; |
|  |  |
|  | do { |
|  | mid = (bottom + top) / 2; |
|  | if (item < a[mid]) |
|  | top = mid - 1; |
|  | else if (item > a[mid]) |
|  | bottom = mid + 1; |
|  | } while (item != a[mid] && bottom <= top); |
|  |  |
|  | if (item == a[mid]) { |
|  | printf("Binary search successfull!!\n"); |
|  | printf("\n %d found in position: %d\n", item, mid + 1); |
|  | } else { |
|  | printf("\n Search failed\n %d not found\n", item); |
|  | } |
|  | return 0; |
|  | } |