2.BINARY SEARCH PROGRAM

[*] binary seach programm.c

```c
#include <stdio.h>
int binarySearch(int arr[], int n, int key) {
    int low = 0, high = n - 1;
    while (low <= high) {
        int mid = low + (high - low) / 2;
        if (arr[mid] == key)
            return mid;
        else if (arr[mid] < key)
            low = mid + 1;
        else
            high = mid - 1;
    }
    return -1;
}

int main() {
    int n, i, key, result;
    // Example: sorted array input
    scanf("%d", &n);
    int arr[n];
    for (i = 0; i < n; i++)
        scanf("%d", &arr[i]);
    scanf("%d", &key);

    result = binarySearch(arr, n, key);
    if (result == -1)
        printf("Element not found\n");
    else
        printf("Element found at index %d\n", result);

    return 0;
}
```

Output: