

```

1. #include <stdio.h>
#include <math.h>
int main() {
    int t;
    scanf("%d", &t);
    while (t != 0) {
        int n, Key, status = 0;
        scanf("%d", &n);
        int a[n];
        int count = 0;
        for (i = 0; i < n; i++) {
            a[i] = se
            scanf("%d", &a[i]);
        }
        scanf("%d", &Key);
        for (i = 0; i < n; i++) {
            count++;
            if (Key == a[i]) {
                for status = 1;
                break;
            }
        }
        if (status == 1) {
            printf("Present " + count);
        }
        else {
            printf("Not Present " + count);
        }
        t--;
    }
    return 0;
}

```

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2. #include <stdio.h>

void binary (int n, int arr[], int key) {
    int i, mid, low, high, count = 0;
    low = 0; high = n - 1;
    for (i = 0; i < n; i++) {
        mid = (low + high) / 2;
        if ((++count) && arr[mid] == key) {
            printf("Present %d", count);
            return;
        }
        else if ((++count) && arr[mid] > key) {
            high = mid - 1;
        }
        else if ((++count) && arr[mid] < key) {
            low = mid + 1;
        }
    }
}

```

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}

int main() {
    int t;
    scanf("%d", &t);
    while (t--) {
        int n, i;
        scanf("%d", &n);
        int arr[n], key;
        for (i = 0; i < n; i++) {
            scanf("%d", &arr[i]);
        }
        scanf("%d", &key);
        binary(arr, n, key);
    }
}

```

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3. void linearSearch (int lp, int n, int arr[], int key, int j);
3 int main() {
    int blocksize = 2, key;
    int status = 0;
    int n; int jc = 0;
    scanf("%d", &n);
    int arr[n];
    for (i = 0; i < n; i++) {
        scanf("%d", &arr[i]);
    }
    int lp = 0, hp = n - 1;
    scanf("%d", &key);

    while (hp < n) {
        if (arr[hp] <= key) {
            if (arr[lp] == key) {
                status = 1;
                printf("Present %d", jc);
                return 0;
            }
            else if (arr[hp] == key) {
                status = 1;
                printf("Present %d", jc);
                return 0;
            }
        }
    }
}

```



```
else {  
    lp = np;  
    np = np + blocksize;  
    jc++;  
}
```

```
}
```

```
}
```

```
else {  
    linearSearch(lp, ncount, arr, key, jc, status);  
    return 0;  
}
```

```
}
```

```
}
```

```
linearSearch(lp, ncount, arr, key, jc, status);
```

```
}
```

```
void linearSearch(int lp, int nint count, int arr, int key, int jc, intint status) {
```

```
    int i;
```

```
    for (i = 0; i < n; i++) {
```

```
        count if (arr[i] == key) {
```

```
            jc++;
```

```
            status = 1;
```

```
            break;
```

```
        }
```

```
        jc++;
```

```
    }
```

```
    if (status == 1) {
```

```
        printf("Present %d", jc);
```

```
    }
```

```
    else {
```

```
        printf("Not present %d", jc);
```

```
    }
```

```
}
```