

# Frequency Queries ★

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You are given  $q$  queries. Each query is of the form two integers described below:

- **1  $x$** : Insert  $x$  in your data structure.
- **2  $y$** : Delete one occurrence of  $y$  from your data structure, if present.
- **3  $z$** : Check if any integer is present whose frequency is exactly  $z$ . If yes, print 1 else 0.

The queries are given in the form of a 2-D array **queries** of size  $q$  where **queries**[ $i$ ][0] contains the operation, and **queries**[ $i$ ][1] contains the data element.

### Example

**queries** = [(1,1), (2,2), (3,2), (1,1), (1,1), (2,1), (3,2)]

The results of each operation are:

Operation	Array	Output
(1,1)	[1]	
(2,2)	[1]	
(3,2)		0
(1,1)	[1,1]	
(1,1)	[1,1,1]	
(2,1)	[1,1]	
(3,2)		1

Return an array with the output: [0,1].

### Function Description

Complete the freqQuery function in the editor below.

freqQuery has the following parameter(s):

- int queries[q][2]: a 2-d array of integers

### Returns

- int[]: the results of queries of type **3**

### Input Format

The first line contains of an integer  $q$  the number of queries.

Each of the next  $q$  lines contains two space-separated integers, **queries**[ $i$ ][0] and **queries**[ $i$ ][1].

### Constraints

- $1 \leq q \leq 10^5$
- $1 \leq x, y, z \leq 10^9$
- All **queries**[ $i$ ][0]  $\in \{1, 2, 3\}$
- $1 \leq \text{queries}[i][1] \leq 10^9$

### Sample Input 0

```
8
1 5
1 6
3 2
1 10
```

```
1 10
1 6
2 5
3 2
```

#### Sample Output 0

```
0
1
```

#### Explanation 0

For the first query of type **3**, there is no integer whose frequency is **2** (*array* = [5, 6]). So answer is **0**.

For the second query of type **3**, there are two integers in *array* = [6, 10, 10, 6] whose frequency is **2** (integers = **6** and **10**). So, the answer is **1**.

#### Sample Input 1

```
4
3 4
2 1003
1 16
3 1
```

#### Sample Output 1

```
0
1
```

#### Explanation 1

For the first query of type **3**, there is no integer of frequency **4**. The answer is **0**. For the second query of type **3**, there is one integer, **16** of frequency **1** so the answer is **1**.

#### Sample Input 2

```
10
1 3
2 3
3 2
1 4
1 5
1 5
1 4
3 2
2 4
3 2
```

#### Sample Output 2

```
0
1
1
```

#### Explanation 2

When the first output query is run, the array is empty. We insert two **4**'s and two **5**'s before the second output query, *arr* = [4, 5, 5, 4] so there are two instances of elements occurring twice. We delete a **4** and run the same query. Now only the instances of **5** satisfy the query.

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Language C#



```
1 using System.CodeDom.Compiler;
2 using System.Collections.Generic;
3 using System.Collections;
4 using System.ComponentModel;
5 using System.Diagnostics.CodeAnalysis;
6 using System.Globalization;
7 using System.IO;
8 using System.Linq;
9 using System.Reflection;
10 using System.Runtime.Serialization;
11 using System.Text.RegularExpressions;
12 using System.Text;
13 using System;
14
15 class Solution {
16
17     // Complete the freqQuery function below.
18     static List<int> freqQuery(List<List<int>>> queries) {
19 //create a result array
20         Dictionary<int, int> num_freq_Dictionary = new Dictionary<int, int>();
21         Dictionary<int, int> freq_num_Dictionary = new Dictionary<int, int>();
22
23         List<int> output = new List<int>();
24
25         queries.ForEach(x =>
26         {
27             if (x[0] == 1)
```

Line: 102 Col: 1

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