

PROBLEM:

Write a method or pseudocode that finds, efficiently with respect to time used, all numbers that occur exactly once in the input collection.

For example, `findUniqueNumbers(Array.asList(1, 2, 1, 3))` should return `{ 2, 3 }`

EXPLANATION:

Here's a breakdown of the method:

Create a `HashMap` to count the occurrences of each number in the input collection.

Iterate through the input collection and increment the count for each number in the `HashMap`.

Create a `HashSet` to store the unique numbers.

Iterate through the `HashMap` and add the numbers that occur exactly once to the `HashSet`.

Return the `HashSet` of unique numbers.

Time complexity: $O(n)$, where n is the size of the input collection.

PSEUDOCODE:

```
function findUniqueNumbers(numbers)
    countMap = {}
    for num in numbers
        countMap[num] = countMap.getOrDefault(num, 0) + 1
    uniqueNumbers = {}
    for entry in countMap
        if entry.value == 1
            uniqueNumbers.add(entry.key)
    return uniqueNumbers
```

IMPLEMENTATION:

```
import java.util.*;

public class UniqueNumbers {
    public static Set<Integer> findUniqueNumbers(List<Integer> numbers) {
        Map<Integer, Integer> countMap = new HashMap<>();

        // Count the occurrences of each number
        for (int num : numbers) {
            countMap.put(num, countMap.getOrDefault(num, 0) + 1);
        }

        // Find numbers that occur exactly once
        Set<Integer> uniqueNumbers = new HashSet<>();
        for (Map.Entry<Integer, Integer> entry : countMap.entrySet()) {
            if (entry.getValue() == 1) {
                uniqueNumbers.add(entry.getKey());
            }
        }

        return uniqueNumbers;
    }

    public static void main(String[] args) {
        List<Integer> numbers = Arrays.asList(1, 2, 1, 3);
        Set<Integer> uniqueNumbers = findUniqueNumbers(numbers);
        System.out.println(uniqueNumbers); // [2, 3]
    }
}
```

