34. First Unique Number

You have a queue of integers, you need to retrieve the first unique integer in the queue.

Implement the FirstUnique class:

● FirstUnique(int[] nums) Initializes the object with the numbers in the queue.

● int showFirstUnique() returns the value of the first unique integer of the queue,

and returns -1 if there is no such integer.

● void add(int value) insert value to the queue.

Code:

```
from collections import deque, defaultdict

class FirstUnique:

    def __init__(self, nums):
        self.queue = deque()
        self.count = defaultdict(int)
        for num in nums:
            self.add(num)

    def showFirstUnique(self):
        while self.queue and self.count[self.queue[0]] > 1:
            self.queue.popleft()
        return self.queue[0] if self.queue else -1

    def add(self, value):
        self.count[value] += 1
        if self.count[value] == 1:
            self.queue.append(value)

firstUnique = FirstUnique([2, 3, 5])
print(firstUnique.showFirstUnique())
firstUnique.add(5)
print(firstUnique.showFirstUnique())
firstUnique.add(2)
print(firstUnique.showFirstUnique())
firstUnique.add(3)
print(firstUnique.showFirstUnique())
```

Output:

Time Complexity:

- T(n)= O(n)