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.

PROGRAM:

```
from collections import OrderedDict, deque
class FirstUnique:
    def __init__(self, nums):
        self.queue = deque()
        self.counts = {}
        for num in nums:
            self.add(num)
    def showFirstUnique(self) -> int:
        while self.queue and self.counts[self.queue[0]] > 1:
            self.queue.popleft()
        return self.queue[0] if self.queue else -1
    def add(self, value: int) -> None:
        self.counts[value] = self.counts.get(value, 0) + 1
        if self.counts[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:

```
PS C:\Users\chall\OneDrive\Desktop\DAA> & C:/Users/chall/AppData/Local/Programs/Python/Python312/python.exe
"
2
2
3
-1
PS C:\Users\chall\OneDrive\Desktop\DAA>
```

TIME COMPLEXITY:

Time complexity for the above code is

F(n)=O(m)