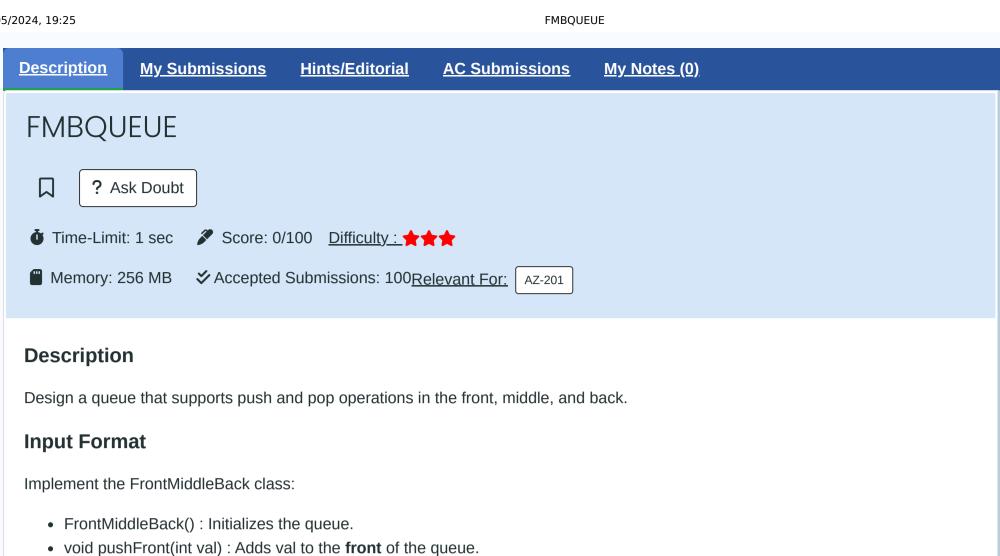
09/05/2024, 19:25



- void pushMiddle(int val): Adds val to the middle of the queue.
- void pushBack(int val) : Adds val to the **back** of the queue.
- int popFront(): Removes the **front** element of the queue and returns it. If the queue is empty, return -1.
- int popMiddle(): Removes the **middle** element of the queue and returns it. If the queue is empty, return -1.
- int popBack(): Removes the **back** element of the queue and returns it. If the queue is empty, return -1.

Note: When there are **two** middle position choices, the operation is performed on the **left** middle position choice. For example:

- Pushing 6 into the middle of [1, 2, 3, 4, 5] results in [1, 2, 6, 3, 4, 5].
- Popping the middle from [1, 2, <u>3</u>, 4, 5, 6] returns 3 and results in [1, 2, 4, 5, 6].

Output Format

For every *pop* function, return the popped element.

Constraints

 $1 \le \text{val} \le 10^9$

At most 10⁵ calls will be made to pushFront, pushMiddle, pushBack, popFront, popMiddle, and popBack.

Sample Input 1

С Сору

```
pushFront 1
pushBack 2
pushMiddle 3
pushMiddle 4
popFront
popMiddle
popMiddle
popBack
popFront
```

<u>C++14[GCC]</u> ▼

```
Q
       1
3
                                                                                Submit
    #include <bits/stdc++.h>
    using namespace std;
2
3
    class FrontMiddleBackQueue
4
```