346.Moving Average from Data Stream

Easy

Given a stream of integers and a window size, calculate the moving average of all integers in the sliding window.

Example:

MovingAverage m = new MovingAverage(3);

m.next(1) = 1

m.next(10) = (1 + 10) / 2

m.next(3) = (1 + 10 + 3) / 3

m.next(5) = (10 + 3 + 5) / 3

```cpp
class MovingAverage {
public:
    MovingAverage(int size) {
        this->size = size;
        sum = 0;
    }

    double next(int val) {
        if (q.size() >= size) {
            sum -= q.front(); q.pop();
        }
        q.push(val);
        sum += val;
        return sum / q.size();
    }

private:
    queue<int> q;
    int size;
    double sum;
};
```