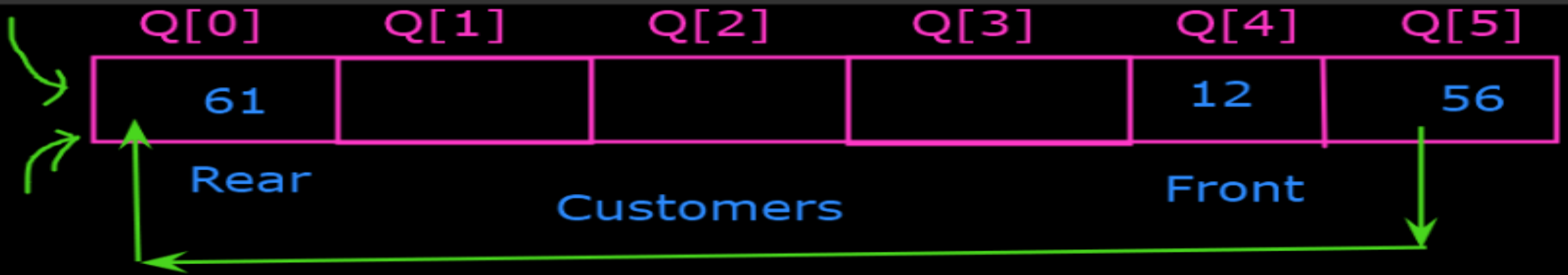


Algorithms & Data Structure

Kiran Waghmare

-Queues

- non-primitive linear data structure
- ordered, homogenous, linear-->elements
- 2 link--> rear and front
- Rear--> Insertion operation ----> enqueue()
- Front--> Deletion operation ----> dequeue()
- FIFO: First In First Out
- Total no of elements in queue = $\text{rear} - \text{front} + 1$

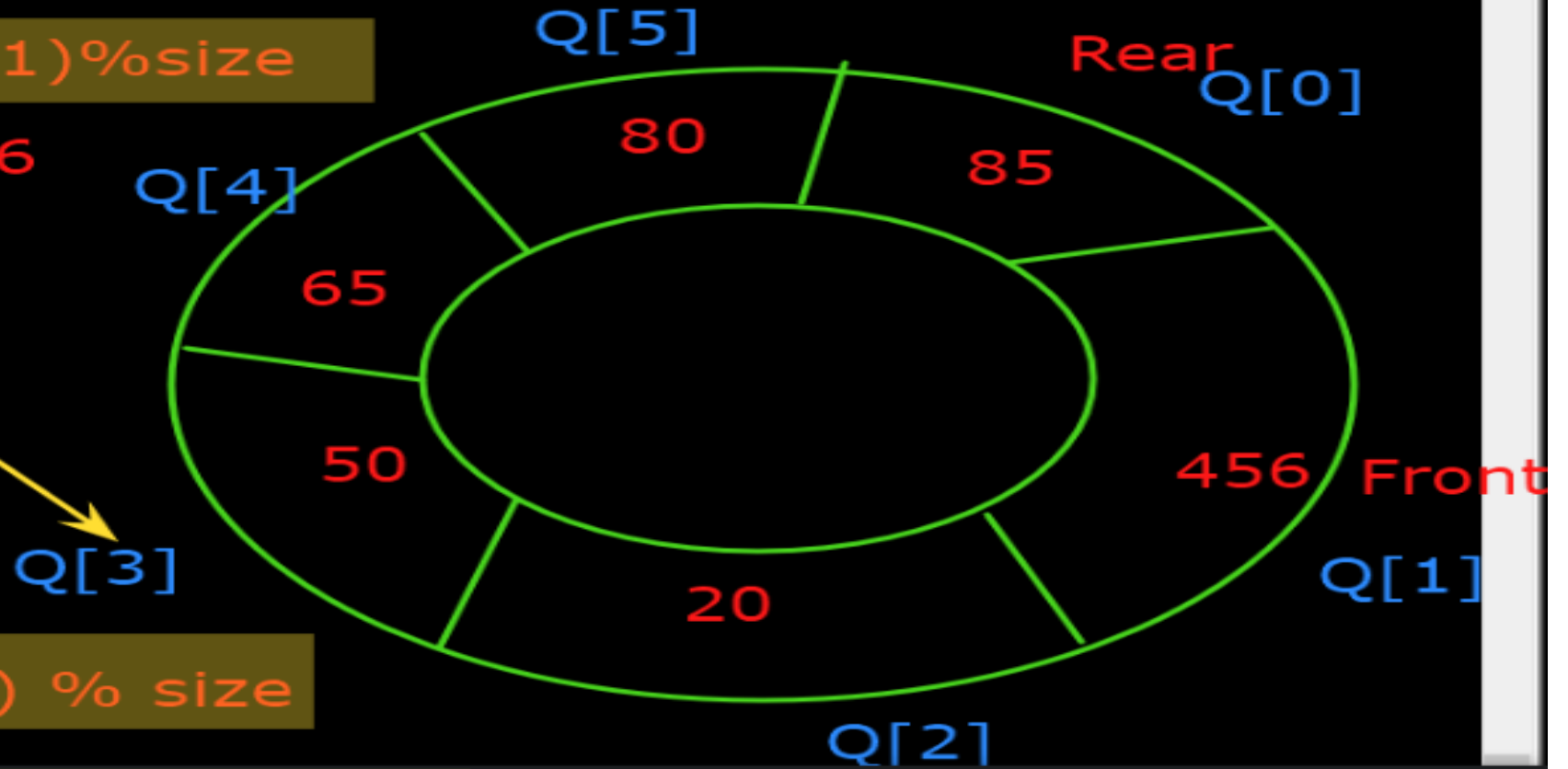


$\text{rear} = (\text{rear} + 1) \% \text{size}$

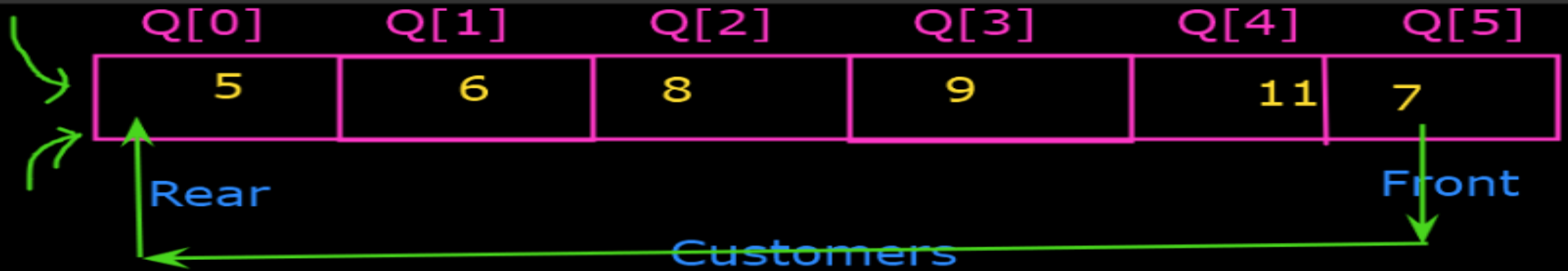
$$\begin{aligned} &= 2 + 1 \% 6 \\ &= 3 \% 6 \\ &= 3 \end{aligned}$$

Rear:-1
Front:-1

- Circular Queue
- Priority Queue
- Deque



$\text{front} = (\text{front} + 1) \% \text{size}$



$\text{rear} = (\text{rear} + 1) \% \text{size}$

counter

Rear:-1
Front:-1

- Circular Queue
- Priority Queue
- Deque

Q[3]

$\text{front} = (\text{front} + 1) \% \text{size}$

