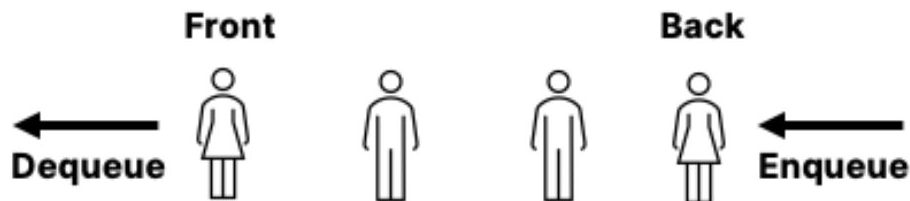




Introduction to Queues

What is a Queue?



Sequential abstract data type based on FIFO (First In, First Out) principle

First to enter the queue is first to leave it

Contrast with Stack and LIFO – last to enter the stack is first to leave

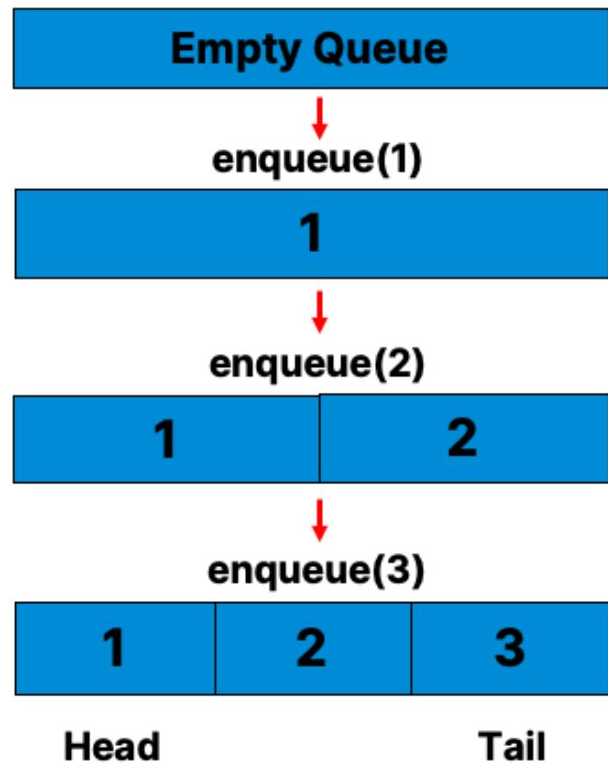
Stack has two main operations: `push()` and `pop()`, both used on “top” item

Queue has two main operations: `enqueue()` and `dequeue()`

enqueue()

Adds item to one end of the Queue
sequence

Last item added is “tail” of the Queue



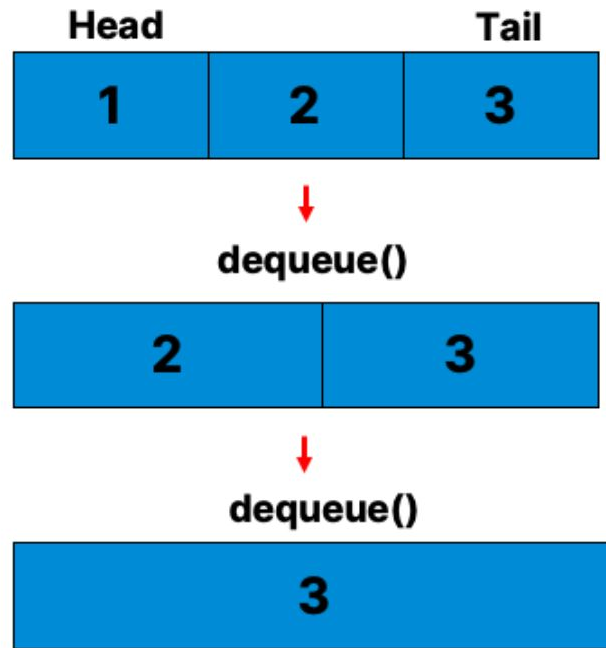
dequeue()

Removes item from queue

Always removes the first item in queue,
from opposite end where items are
enqueued

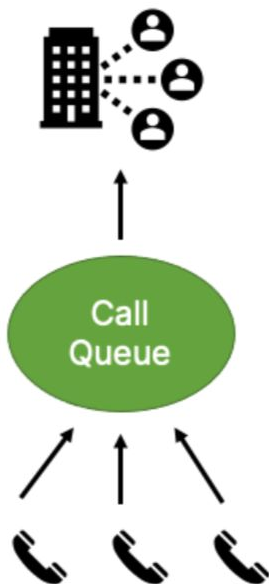
First item to be dequeued is called “head”
of the Queue

As with pop(), dequeue() returns removed
item

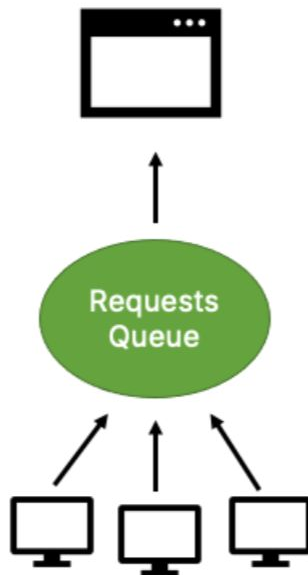


What can we do with Queues?

Phone call routing



Web Server



Networks

