QUIZ QUEUES CONCEPTUAL

If we peeked at the following queue, what value would be returned, and what would the new queue look like from back to front?

```
Queue: [Charlie, Bob, Ann]
Front: Ann
Back: Charlie
```

Return Value: Charlie, Queue: [Charlie, Bob, Ann]

Return Value: Ann, Queue: [Charlie, Bob]

Return Value: Ann, Queue: [Charlie, Bob, Ann]

If the following queue was implemented using a linked list, what would the linked list look like if "Adam" was enqueued?

```
Queue: Charlie -> Bob -> Ann
Front: Ann
Back: Charlie
```

Ann → Bob → Charlie → Adam

Bob → Charlie → Adam

Adam → Charlie → Bob → Ann

👏 Correct! Because queues follow a First In First Out structure, the value enqueued onto the queue will become the tail node in a linked list.

In which of the following scenarios, would a queue **NOT** be the ideal data structure to model the situation?

Pile of dirty plates in the sink.

👏 Correct! In a stack of dirty plates in the sink, the last dish placed will be at the top of the stack and will be the first one washed. This is a Last In, First Out structure, like a stack, not queue.

Cars sitting through traffic.

Waiting in line for groceries.

If we dequeued a person from the following queue, what would be returned, and what would the new queue look like from back to front?

```
Queue: [Charlie, Bob, Ann]
Front: Ann
Back: Charlie
```

Return Value: Charlie, Queue: [Charlie, Bob, Ann]

Return Value: Charlie, Queue: [Bob, Ann]

Return Value: Ann, Queue: [Charlie, Bob]

👏 Correct! Dequeuing from the queue removes and returns the value from the front of the queue.

In what case would queue underflow occur?

Dequeuing data from an empty queue

👏 Correct! If the queue is empty, then there is nothing in the queue to dequeue. Therefore, dequeuing data from the queue will result in queue underflow.

Enqueuing data onto an empty queue.

Dequeuing data from a full queue.

Enqueuing data onto a full queue.