Abstract Data Type

An **Abstract Data Type (ADT)** is a mathematical definition of an object with operations to interact with that object.

Queue ADT
state Set of elements behavior **enqueue(element)** – add a new element to the collection. **dequeue()** – returns the element that has been in the collection the longest, and removes it. **peek()** – find, but do not remove the element that has been in the collection the longest.

Stack ADT
state Set of elements behavior **push(element)** – add a new element to the collection. **pop()** – returns the element that has been in the collection the shortest, and removes it. **peek()** – find, but do not remove the element that has been in the collection the shortest.

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What Data Structures for a Queue?

A data structure is a specific organization of data (and associated algorithms) to implement an abstract data type.

How would you implement a queue?

I.e., what data structure would you use?

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Tradeoffs

What makes the circular queue implementation different from the linked list implementation? In what ways is one more desirable than the other?

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Your TODO list

Make sure you're on Ed.

Get started on Exercise 0 (and update your IDE/java installs while you're at it).

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