

Queue ADT

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Queue

- FIFO

Queue ADT: Specification

- Elements
 - QueueElements (any type)
- Structure
 - any structure to track arrival order
 - we can make a list!

Operations

- `create(QueuePtr)`
- `terminate(QueuePtr)`
- `isFull(QueuePtr)`
- `isEmpty(QueuePtr)`
- `size(QueuePtr)`

Operations

- enqueue(QueuePtr, Data)
- dequeue(QueuePtr, DataPtr)
- peek(QueuePtr, DataPtr)

Implementation

- An array
 - circular vs not
- What does struct Queue look like?
- Advantages/disadvantages?
 - challenges?
 - queueCreate, queueIsFull, queueEnqueue, queueDequeue

Implementation

- Using a singly linked list
 - benefits?
 - disadvantages?
- C struct
- queueCreate, queueEnqueue, queueDequeue

Implementation

- Using a singly linked circular list
 - benefits?
 - disadvantages?
- C struct
- queueCreate, queueEnqueue, queueDequeue

