Queue and Iterator

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- **size** how many are in the queue?

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Have a look at the Queue interface.

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“A Queue implementation that extends this class must minimally define a method Queue.offer(E) which does not permit insertion of null elements, along with methods Queue.peek(), Queue.poll(), Collection.size(), and a Collection.iterator() supporting Iterator.remove(). Typically, additional methods will be overridden as well. If these requirements cannot be met, consider instead subclassing AbstractCollection.”

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Can you write it?

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- Like **ArrayStack**, adds at the "end".
- But how can it remove at the beginning (index 0),
- without moving everyone last one,
- which takes $\mathrm{O}(n)$ time?

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Serve Victor and then Irina.

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- but I don’t really have to.
- Actually, what I do is set first=2 and last=3.

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- 0:null 1:null 2:Parul 3:Joe 4:null (first=2, last=3)

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- Lance arrives.

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- Notice that we take the opportunity to put the first person in chair 0.

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Same first and last! But now it's empty!!

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Or completely full of nulls?

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- that does not depend on the implementation.

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It's a new kind of for-loop!

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- Otherwise if the seats are all full,
- you won't know when to stop!

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- ArrayQueue implementation keeps track of next index and count.