

ArrayDeque

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It is an implementation of the Deque interface.

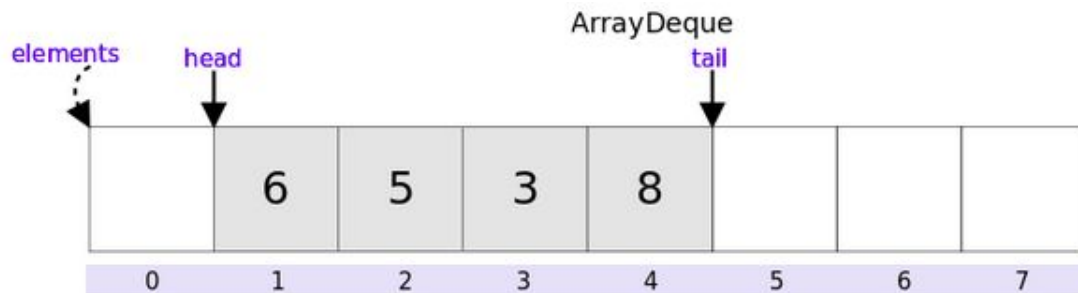
It is also known as Array Double Ended Queue (pronounced ArrayDeck)

It is an array that can add/remove from both sides and it can grow.

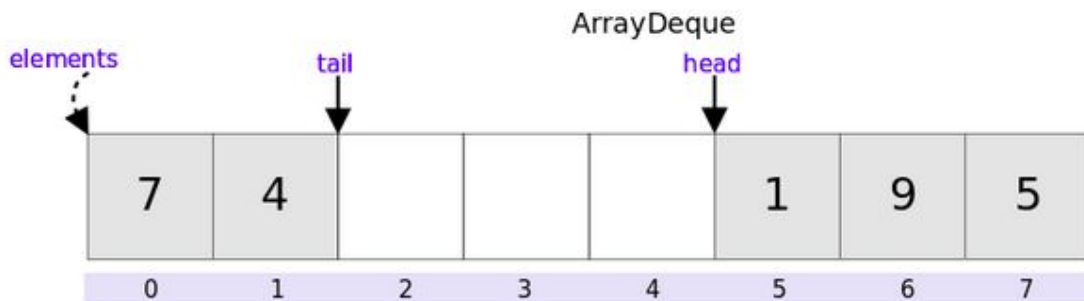


ArrayDeque Configurations

- Head and tail are in order



- Head and tail are out of order (data wraps around)



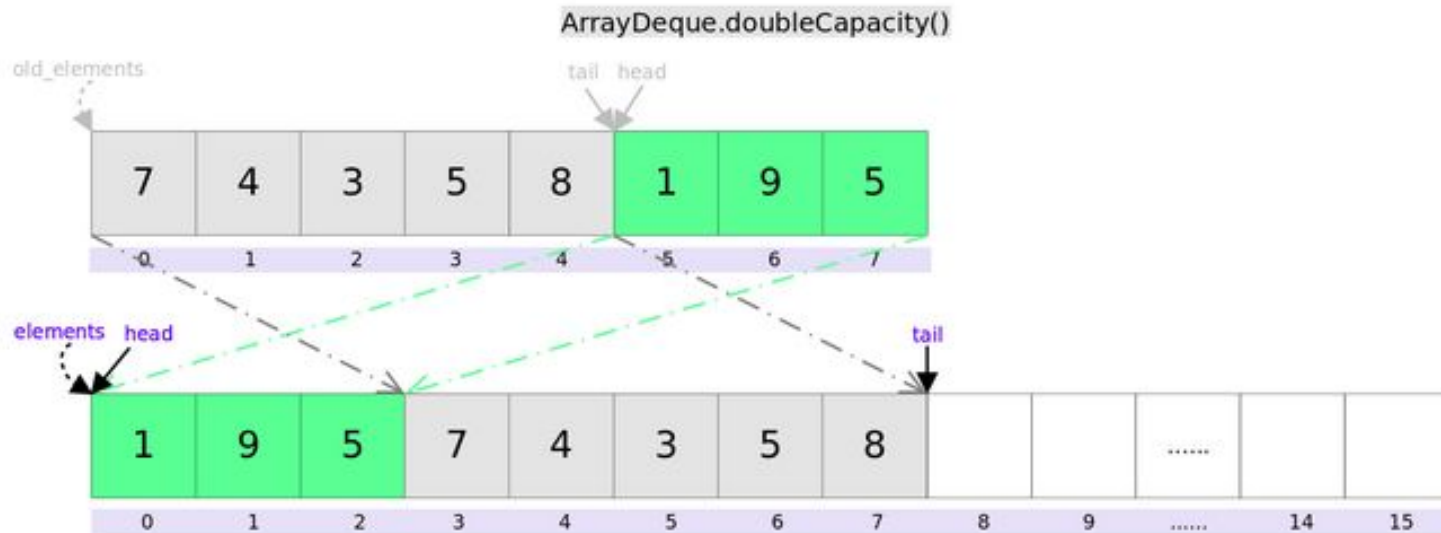
What does it happen when the ArrayDeck is completely full?



What does it happen when the ArrayDeque is completely full?

Copy the values to a new array which doubles the deque size.

Replace the old array with the new one



Let's implement a generic Deque

```
public class MyDeque<E>{
    private E[] data;
    private int size;
    private int start, end;

    public MyDeque(){ }
    public MyDeque(int initialCapacity){ }
    public int size(){ }
    public String toString(){ }
    public void addFirst(E element){ }
    public void addLast(E element){ }
    public E removeFirst(){ }
    public E removeLast(){ }
    public E getFirst(){ }
    public E getLast(){ }
}
```

Directions

