

DLPriorityQueue Pseudocode

```
public DLPriorityQueue() {
```

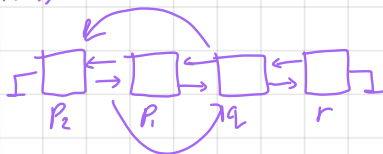
- Set head & tail to null

```
public void updatePriority(T dataItem, double priority) throws InvalidElementException
```

- boolean value dataItemExists = false
- while (curr.getNext() != null)
 - ↳ If (dataItem == curr.getDataItem())
 - ↳ dataItemExists = true
 - break;
 - else
 - ↳ curr.getNext()
- if (dataItemExists != true)
 - ↳ throw InvalidElementException
- create temp dataItem, get next & prev
- curr = head, getNext & prev
- sorted = false
- while (curr.getNext() != null and sorted = false)
 - ↳ if (dataItem.priority < curr.priority)
 - ↳ dataItem.prev = curr.prev
 - curr.prev = dataItem
 - dataItem.next = curr
 - sorted = true
 - else
 - ↳ curr = curr.getNext()

```
public String toString()
```

```
p.getPrev().setNext(p.getNext())  
p.getNext().setPrev(p.getPrev())
```



```
public void add(T dataItem, double priority)
```

- boolean value 'sorted' to check if node was sorted
- curr = head, get priority, prev
- while (curr.getNext() != null && sorted = false)
 - ↳ if (dataItem.priority < curr.priority)
 - ↳ dataItem.prev = curr.prev
 - curr.prev = dataItem
 - dataItem.next = curr
 - sorted = true or try break;
 - else
 - ↳ curr = curr.getNext()

```
public T removeMin() throws EmptyPQException
```

- if (head == null)
 - ↳ throw EmptyPQException
- RmvdDataItem = head
- (RmvdDataItem.next).setPrev = null
- RmvdDataItem.setNext = null
- return RmvdDataItem.getDataItem

```
public boolean isEmpty()
```

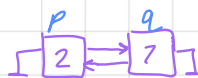
- if (front == null and rear == null)
 - ↳ return true
- else
 - ↳ return false

```
public int size()
```

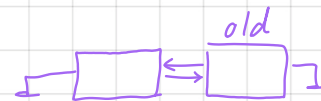
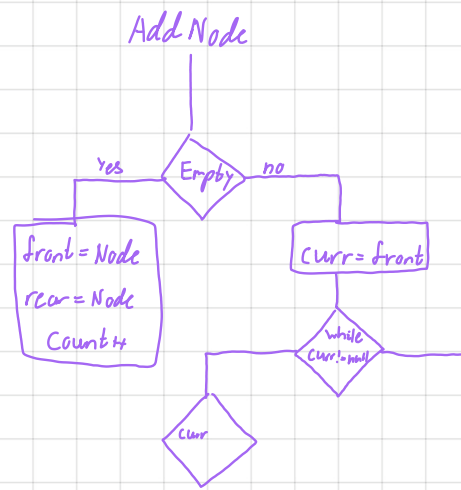
- counter = 0
- while (curr.getNext() != null)
 - ↳ counter++
 - curr = curr.getNext()
- return counter

```
public DLinkedNode<T> getRear()
```

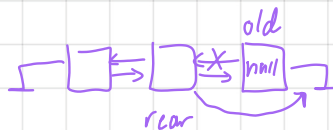
- return rear



```
if oldNode = front  
-
```

if (front) front next set Prev(null)
if (



	front	rear
next	✓	x
Prev	x	✓