COP 3330 - 10/28/26

0) O.H. today we change 5-6 pm Zoom link in webcourses announcement

1) Priority Queue (Minimum Heap)
Abstract Data Structure

- add PQ $O(\lg n)$ n = # items in PQ
- remove min item $O(\lg n)$
- look @ min item $O(1)$ operation
- size

Do a PQ of anything that implements the Comparable interface.

```
PriorityQueue<Integer> PQ = new PriorityQueue<>();
```

Don't use

contains	$O(n)$
remove	$O(n)$

use

add	$O(\lg n)$	clear I think $O(1)$
peek	$O(1)$	
poll	$O(\lg n)$	
size	$O(1)$	

TreeSet

Set - add objects
no duplicates
search
remove

Regular Set is "unsorted"

TreeSet - ordered set with more capabilities

add → O(lg n) , n = # items
search ↗
remove ↗

Implementation (balanced) binary search tree)

ceiling
first
floor
last
lower
higher
pollFirst
pollLast
remove (Object)

O(lg n) time

size() O(1)