Module 1 - Lecture 8

Collections Part 2

Review

- ArrayLists
- Queues
- Stacks
- Primitive Wrapper classes

Question...

Who has performed a Google search?

Who has used a dictionary to look up the definition of word?

Who has used the index in a book?

Map<K,V>

Map<K,V>

- Key-Value pairs
- Ordering is not guaranteed
- Duplicate keys are not allowed
- Duplicate values are allowed

Map<K,V>

Create
```
Map<String,Integer> nameAgeMap = new HashMap<String,Integer>();
```

Add elements
```
nameAgeMap.put("Sally", 23);
nameAgeMap.put("Bobby", 8);
```
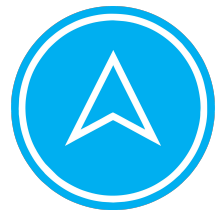
Remove elements
```
nameAgeMap.remove("Bobby");
```

Check if exists
```
nameAgeMap.containsKey("Bobby");
```

Get a value
```
Integer sallyAge = nameAgeMap.get("Sally");
```

Let's Code!

Question...

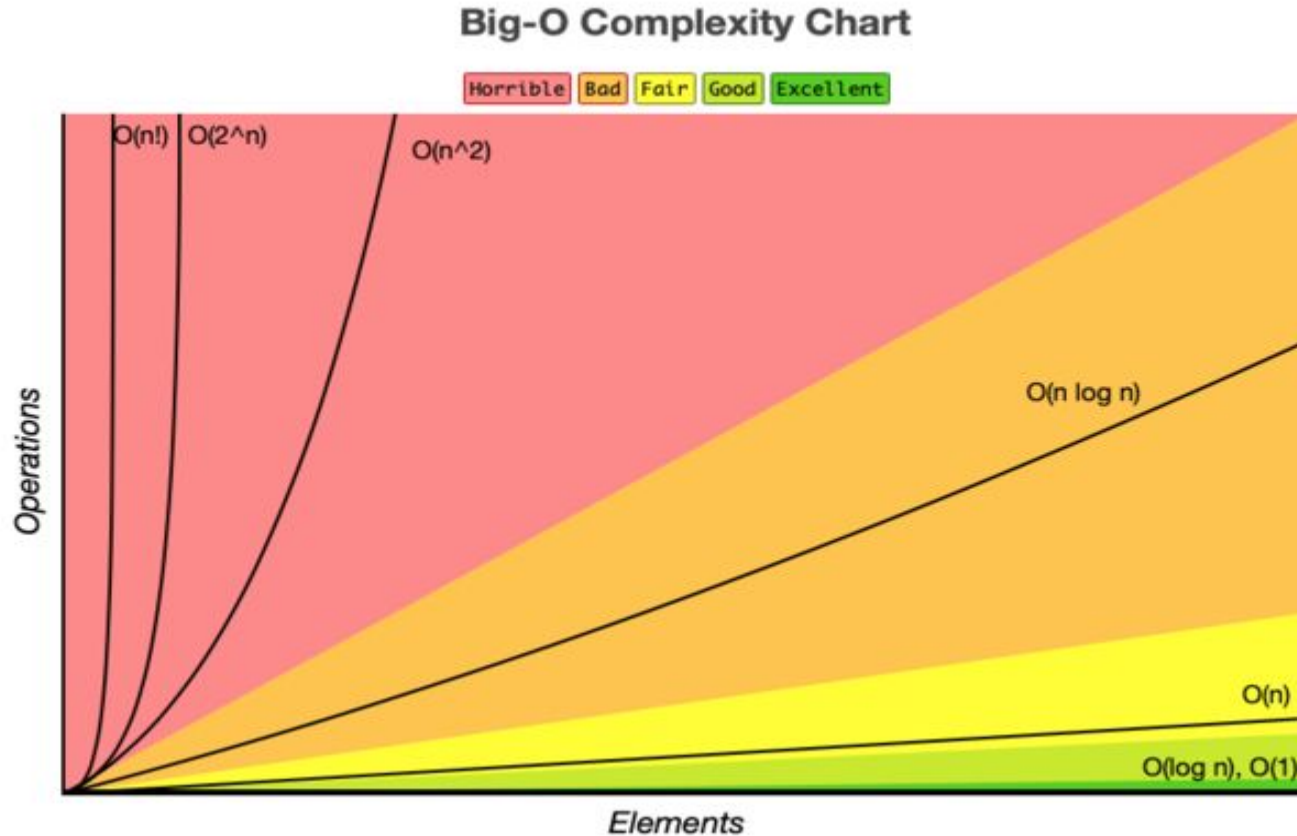How do you keep track of a unique list of stuff?

Set<T>

Set<T>

- A list that contains no duplicate elements
    - Can contain at most 1 null element
    - Cannot contain two elements where element1.equals(element2) returns true

- Ordering is not guaranteed

Let's Code!

ELEVATE YOURSELF

Algorithmic Complexity

Big-O Complexity Chart

Horrible | Bad | Fair | Good | Excellent

O(n!) | O(2^n) | O(n^2)

O(n log n)

O(n)

O(log n), O(1)

Operations

Elements

QUESTIONS?