LEC 15

# CSE 122

# Java Collections

Questions during Class?

Raise hand or send here

sli.do #cse122

BEFORE WE START

***Talk to your neighbors:***

*What was the last video game you played?*

**Respond on sli.do!**

**Instructor:** Brett Wortzman

**TAs:**

| | | | |
|---|---|---|---|
| Archit | Daniel | Naomi | Sreshta |
| Blake P. | David | Neha | Suyash |
| Blake R. | Hanna | Nicole | Trisha |
| Cady | Isis | Rio | Wesley |
| Carson | Jun | Rohan | Yash |
| Cole | Landon | Shreyank | |
| Connor | Michelle | Somya | |


Music: CSE 122 26au Lecture Tunes

# Lecture Outline (1/2)

- Announcements
- `null`
- Recap of Collections
- Dumb Collections
- Java Collections

# Announcements

- CQ2 ends today
- P3 out ~~Friday~~ this weekend, due **12/3**
- No class next week
- PQ2 Tuesday, 12/1
- Gradebooks should be published ~~this week~~ Monday (!!)
- "Final exam" slot: **Tuesday, December 15, 12:30pm – 2:20pm**
- Computer Quiz retakes: **Monday 12/14 through Wednesday 12/16**

# Lecture Outline (2/2)

- Announcements
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# `null`

In Java, a reference type* may or may not contain a value

- By definition, `null` refers to the complete absence of an object
  - Note this is not the same as empty (e.g. `""`) and not `0` !!
- In classes, `null` is the default value of a reference type field unless otherwise stated

*Objects, Strings, Arrays

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- **Recap of Collections**
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# Goal for Today

Review some of the data structures we've talked about this quarter

Understand how Java organizes them with interfaces

# Collections: What classes have we seen so far?

…

Array,
ArrayList,
LinkedList,
Stack,
HashSet & HashMap,
TreeSet & TreeMap

# Collections: What interfaces have we seen so far?

…

Set,
Queue,
List,
Comparable

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# Dumb Collections

We're going to create our own versions of these classes so we can dig into how they all relate to each other!

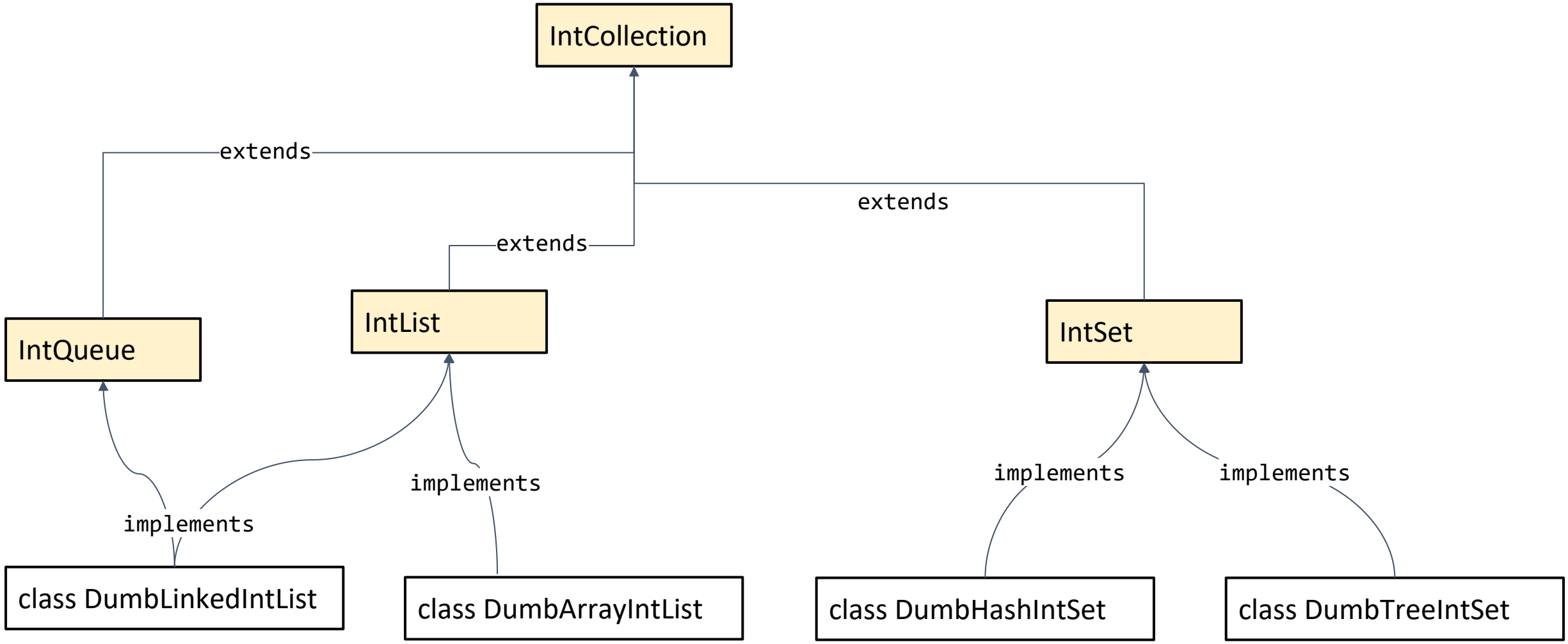
BUT they're going to be real dumb.

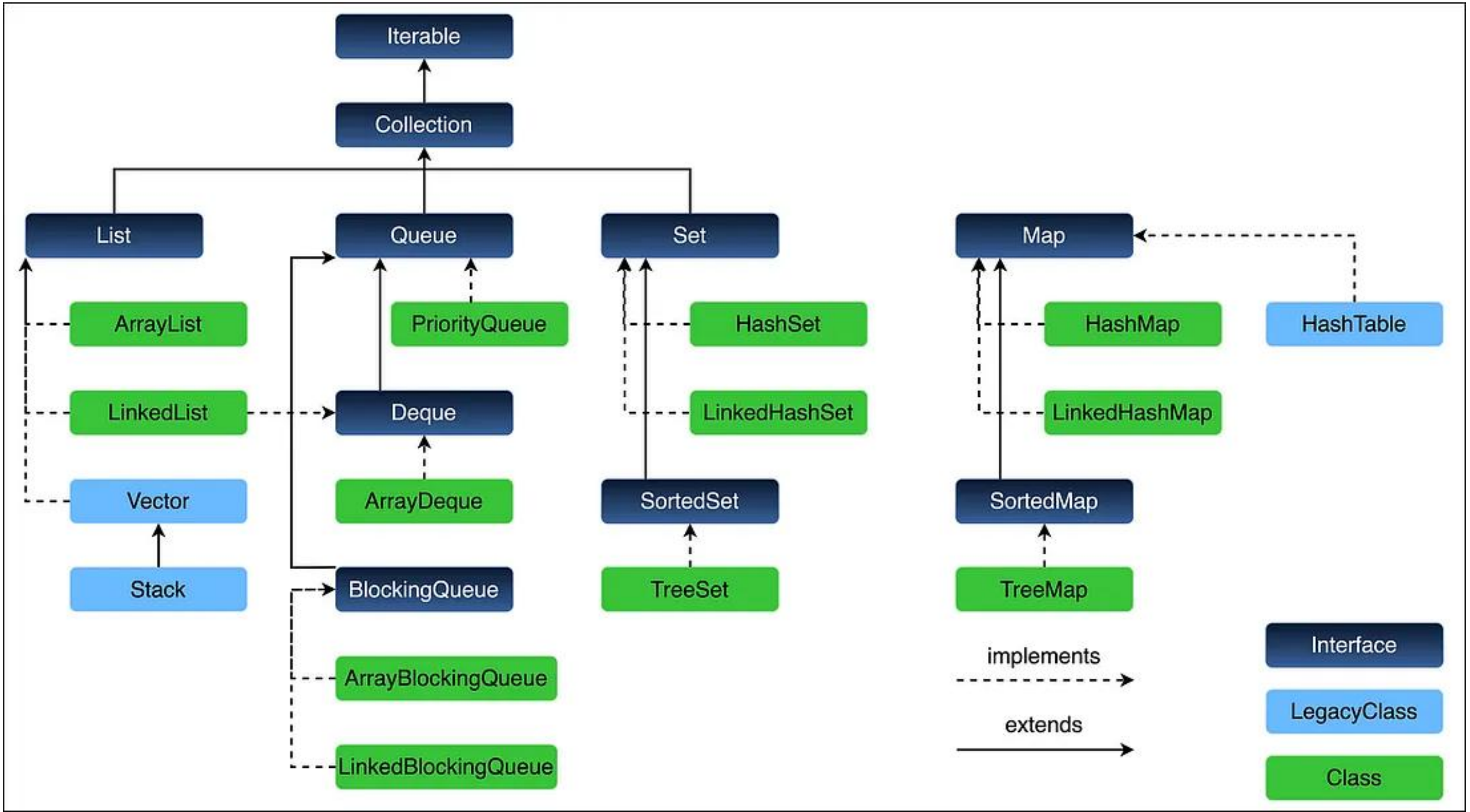
If you want to get a sense of how they're actually implemented, go take CSE 123!

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- **Java Collections**

# IntCollection Relationships




Iterable
Collection
List
Queue
Set
Map
ArrayList
PriorityQueue
HashSet
HashMap
HashTable
LinkedList
Deque
LinkedHashSet
LinkedHashMap
Vector
ArrayDeque
SortedSet
SortedMap
Stack
BlockingQueue
TreeSet
TreeMap
ArrayBlockingQueue
LinkedBlockingQueue
implements
extends
Interface
LegacyClass
Class