

# 3 Things in this Class

## Data Structures & Algorithms

Key  
Interfaces

"Why did you  
use that  
ArrayList"

How to  
Implement  
Interfaces

Binary Tree  
with left +  
right nodes  
on heap

How do we  
classify  
Interface  
Implementations

Big - O

# Key Interfaces

User is aware of the interface

## Collections (Bags)

Order is unimportant

↳ Collection

↳ Set  
↳ Unique

↳ Heap  
↳ priority  
↳ next

Heap  
↳ next()

## Lists

Linear  
Order

↳ STACKS

First in,  
Last out

↳ Queue  
First in,  
first out

no  
Random  
Access

↳ List

↳ Linked List - next()

↳ Double-Linked  
List - next() + prev()

random  
access

## Graphs

Non-Linear

Trees - No loops

Graphs - May have  
Loops

Tree



Graph

