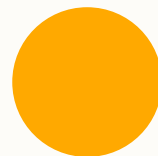# Final Exam Review

Reese Hatfield

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Exam

- Exam Review
  - Coming soon
  - If not here, will not be given credit
    - Unless otherwise arranged
    - There is no makeup
- All topics will be covered
  - Let's look at those

Sorting

- Inheritance
- Abstract Classes
- Interfaces
- Dynamic Dispatch
- Implementation Separation
- Data Modeling
- Type Composition
- Casting
- Comparable/ator sorting
- Copy Constructors

- Checked/Unchecked Exceptions
- try/catch/finally
- Swing
- JButtons, Input methods
- ActionListener
- Event Dispatch Thread
- Layout Managers
- JPanels as containers
- Custom graphics (paintComponent(g))
- Separation of Concern

Sorting

- Threads
- Join, start, run
- Runnable vs Extending Thread
- Volatile & Synchronized
- Generics
- Bounded Types
- ADTs
    - Stacks
    - Queues
    - Maps
    - Lists
- ArrayList + LinkedList

- Algorithms
- Searching
- Sorting
- Recursion
    - Base case
    - Recursive step
- Basic time complexities
- Callstack
- Race Conditions
- Priority Queues