

Exam 3 Review

Chapter 11 Exceptions

- What is an exception?
- What are some examples that cause exceptions?
- What's the difference between an exception and an error?
- How can we handle exceptions?
 - What happens in each of those scenarios?
- How does a try/catch statement work?
- What does the finally clause do?
- What does the throws clause do?
- How does exception propagation work?
- What is the exception class hierarchy?
- What's the difference between a checked and unchecked exception?
- What are some examples of I/O exceptions?

Chapter 12 Recursion

- What is recursion?
- What happens if infinite recursion happens?
- How do we trace a recursive call?
- How does recursion relate to iterative solutions?
- Can you switch back and forth between a recursive method and an iterative method?
- What are the pros and cons of using recursion?

Chapter 13 Collections

- What is a collection?
- What's the difference between a homogenous and heterogeneous collection?
- What is an ADT?
- What are the pros/cons of using arrays to implement ADTs?
- What are the pros/cons of using linked lists to implement ADTs?
- What the pros/cons of using a doubly-linked list?
- What are stacks? Why would you use them?
 - What would you use to implement them?
- What are queues? Why would you use them?
 - What would you use to implement them?
- What are trees?
 - Why are they used?
 - What would you use to implement them?
- What are graphs?
 - Why are they used?
 - What would you use to implement them?
- What is a generic? Where have you used them before?