CS 417/505
Design Patterns

UML Dynamic Behavior part 2
Java review

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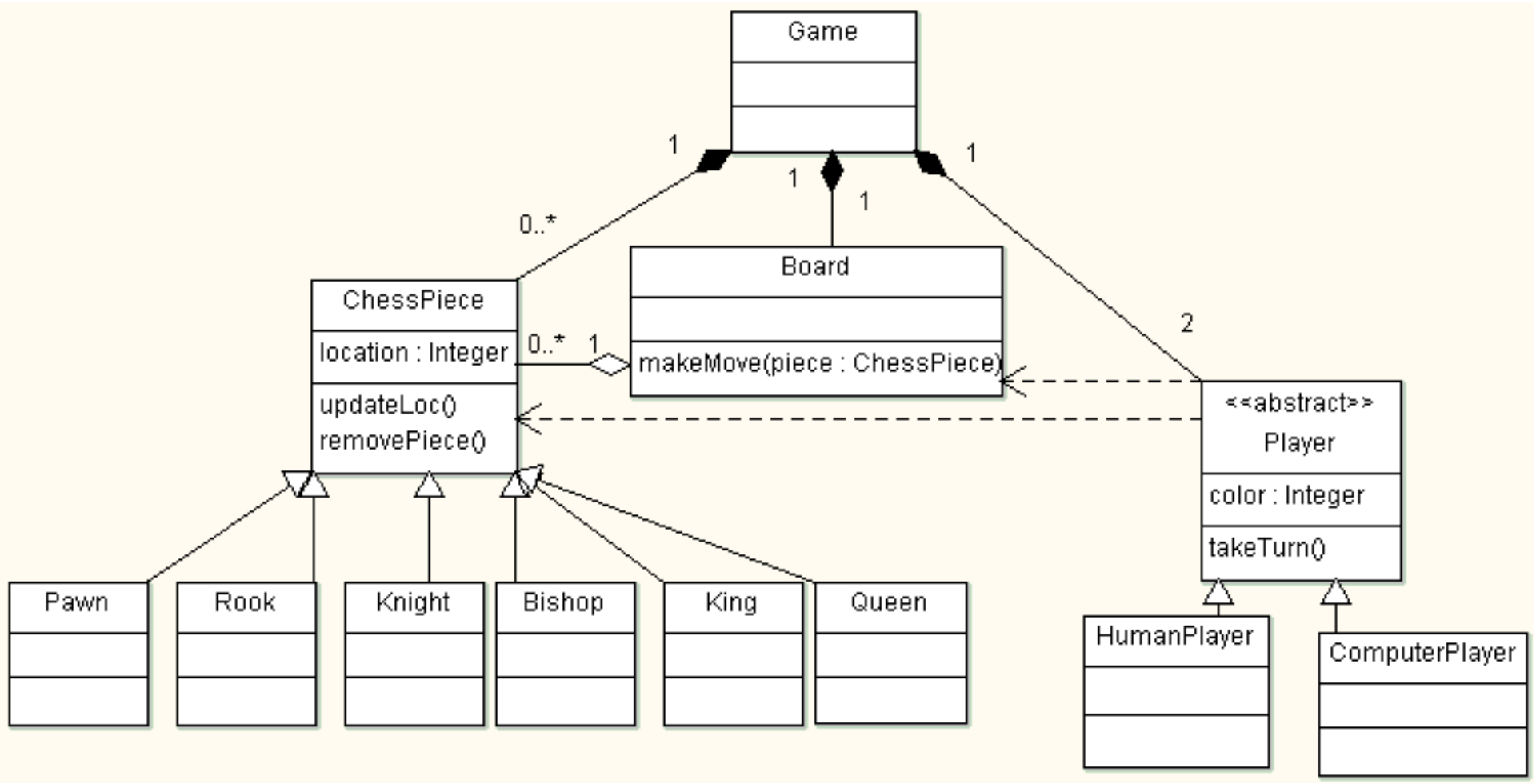
Group work

- Create state diagram for a solar powered calculator

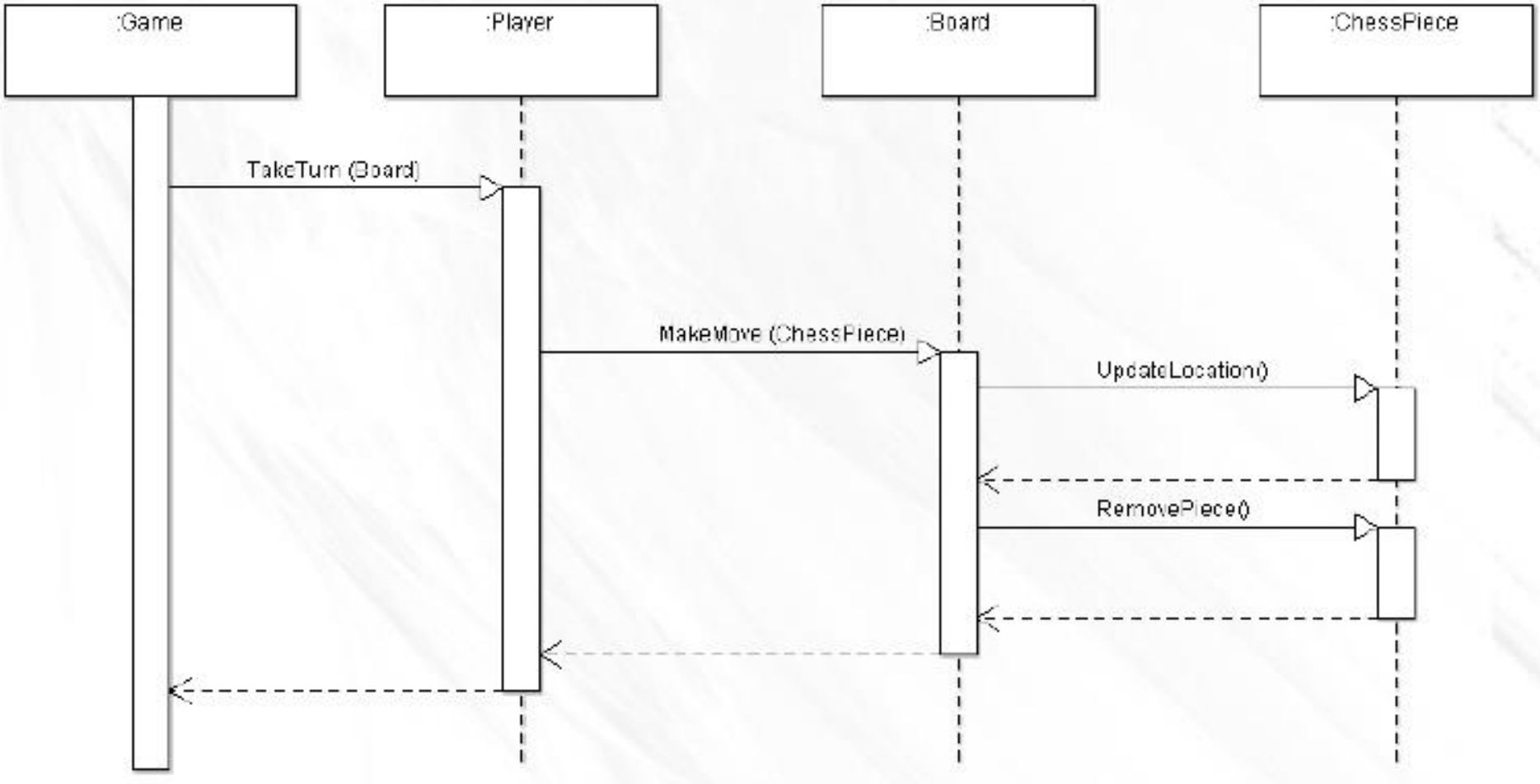
Group work

- Create Chess game – Human user can play another Human user or play against computer
  - Create state diagram
  - Create class diagram
  - Create sequence diagram
    - Player takes turn results in taking piece

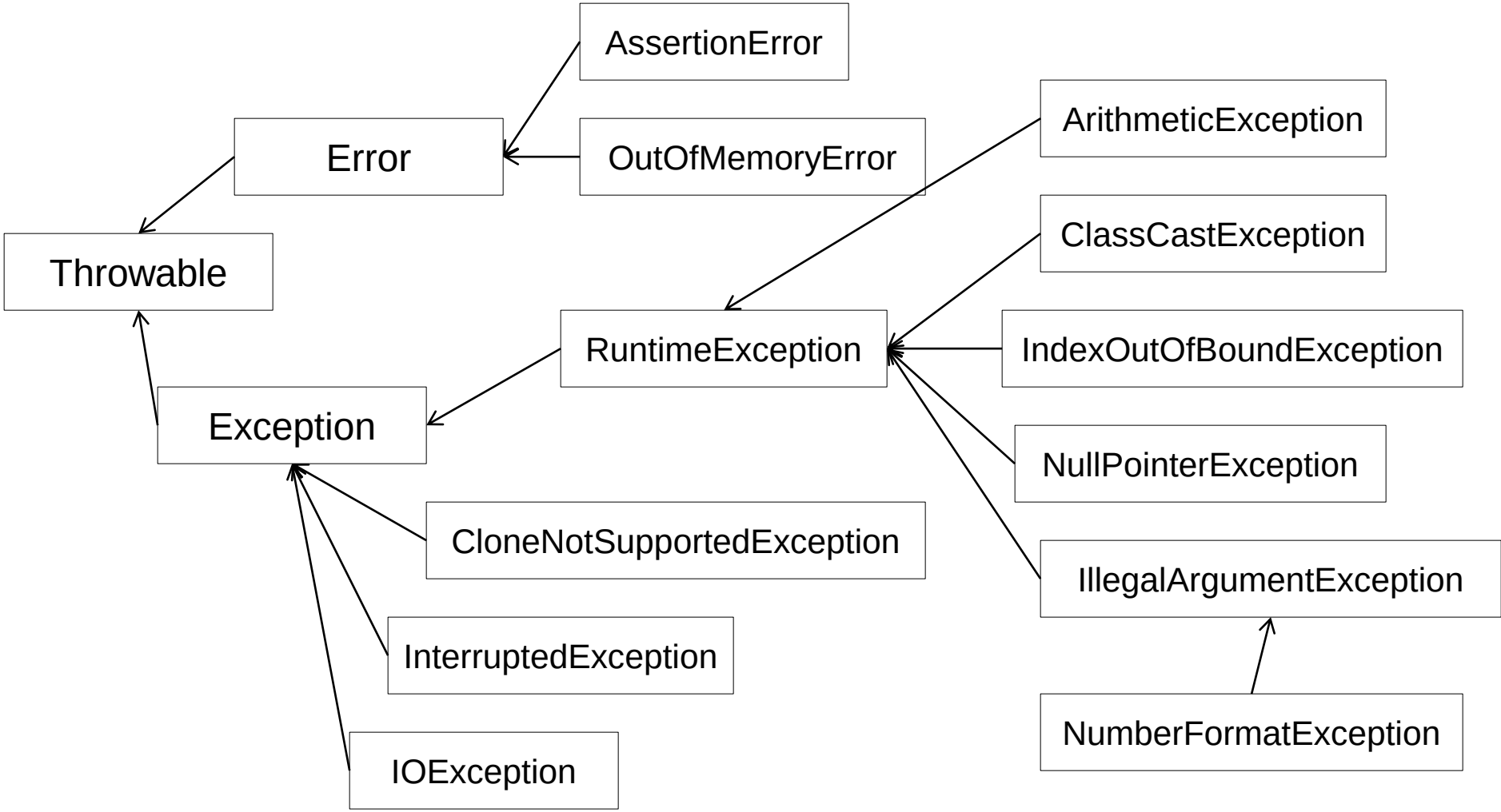
One solution



Sequence diagram



Exception hierarchy



Group work

There are 3 classes A, B, C (plus exceptions). Class A has a method that takes two arguments (doubles) *a* and *b* and returns a double. The function should calculate the (square root of *a)*/*b*. If *a* is negative it should throw NegAException, if *b* is zero it should throw BZeroException. Class B should have a method that calls the method on Class A and catches just the NegAException and prints a message indicating *a* can't be negative. Class C should call Class B's method and if BZeroException is thrown it should output stack debug information.

Create the class diagram and sequence diagram for the 3 possible sequences.

Group work

An instant messaging application where the user can create a person to person connection or connect to a chat, where there is a chat moderator

- State diagram
- Class diagram
- Sequence diagram – create sequences to handle exception scenarios