

# Arrays and ArrayLists

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CSSE 221

Fundamentals of Software Development Honors

Rose-Hulman Institute of Technology

# Announcements – Day 7

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- HW2 returned now.
  - Solutions posted
- Exam 1 week 4, through listeners and shapes.

# Time to finish polymorphism

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- Last class's demo/exercise
- Finish exercise
- If you finish everything early, you can have a few minutes for BallWorlds
- We'll all go onto Arrays together.

# Summary

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- If B extends or implements A, we can write

```
A x = new B();
```

Declared type tells which methods x can access.  
Compile-time error if try to use method not in A.

The actual type tells which class' version of the method to use.

- ▶ Can cast to recover methods that are only in B:

```
((B)x).foo()
```

Now we can access all of B's methods too.

If x isn't an instance of B, it gives a run-time error (class cast exception)

# This week: BallWorlds assignment

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- Tuesday:
  - Intro to UML as a communication tool
  - Writing methods you don't call
  - Using *this*
- Wednesday:
  - Inheritance
  - Polymorphism
- Today:
  - **Introducing next week's assignment**
  - **Arrays and ArrayLists**

# Next week: “Fifteen”



- Arrays (especially 2D)
- Creating GUIs using Swing
- Responding to mouse clicks

# Partners

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- You choose
- Roughly equal skill levels work best
- Sign up on the sheet

# Arrays

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- Notes on board or student summaries
- If this is all review for you, do the quiz and move on
- **ArrayAndArrayList** is in your repository.
  - Converting arrays to ArrayLists
- We'll save 2D arrays for the project