CMSC 132:
Object-Oriented Programming II

Callbacks

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**Callback**

**Definition**
- Executable code passed as argument to other code

**Approach**
1. **Higher-level code passes function as argument to lower-level code**
   - In Java, pass object implementing interface
   - In C/C++, pass pointer to function
2. **Lower-level code invokes callback function to perform desired task**
Callback

Motivation

- Keeps code separate
  - Clean division between higher & lower-level code
- Promotes code reuse
  - Lower-level code supports different callbacks
- Supports event-driven programming
  - Lower-level code registers function as handler

Examples

- Observer pattern → Observer.update()
- Visitor pattern → Visitor.visit()