

# Lecture 21: Design Patterns (Part 3)

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Object-Oriented Analysis and Design

CSCI 6448 - Spring Semester, 2005



## Credit where Credit is Due

- Some of the material for this lecture is taken from “Head First Design Patterns” by Eric and Elisabeth Freeman; as such some of this material is copyright © O’Reilly, 2004



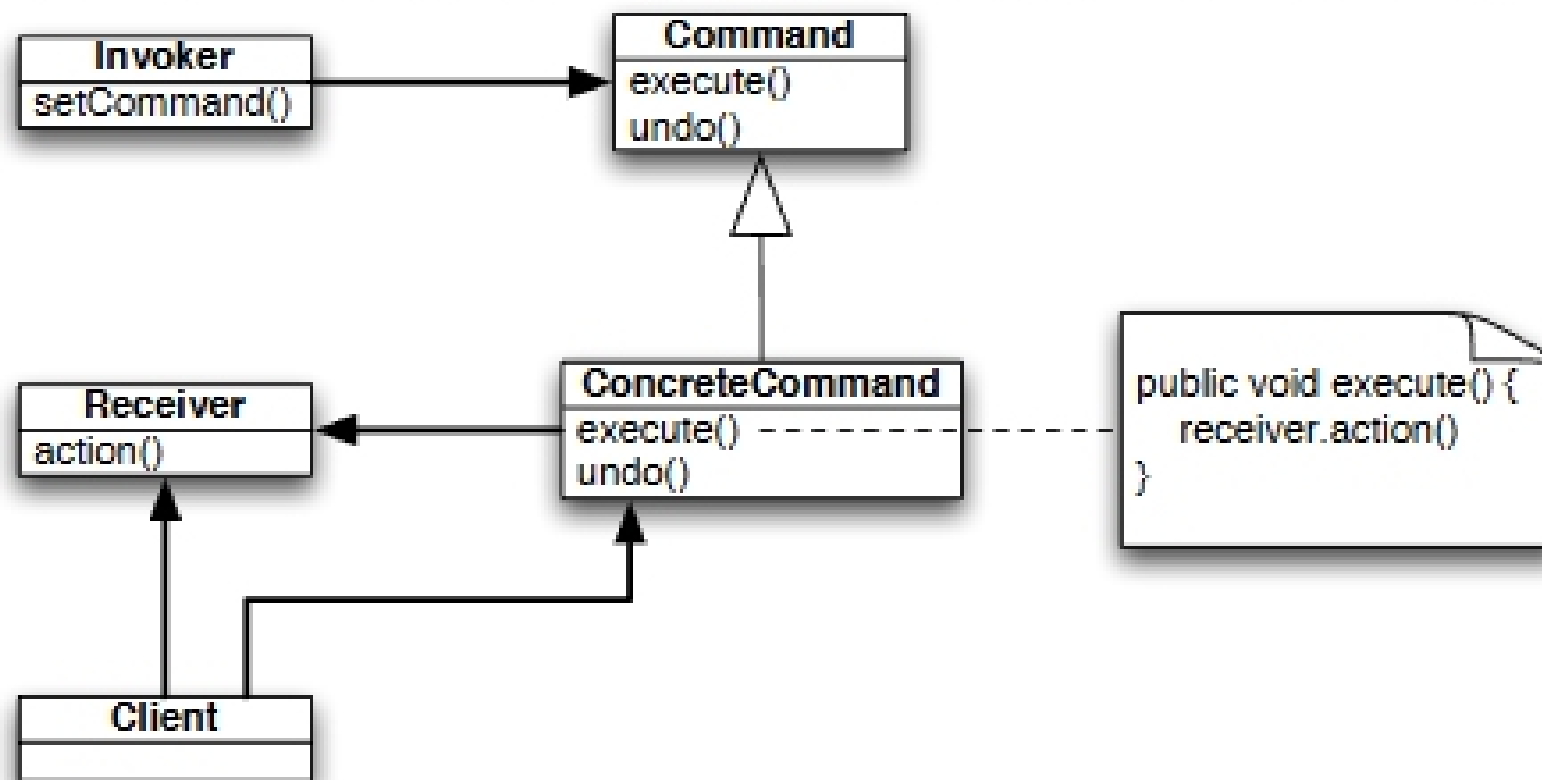
## Goals for this (short) lecture

- Cover three more useful design patterns
  - Command
  - Facade
  - Proxy
- This will bring the number of design patterns covered in this class to at least 15
  - Twelve from lectures 13, 17, and 21 plus Double Dispatch, Blackboard, and Model-View-Controller.

## Command

- The Command Pattern encapsulates a request as an object, thereby letting you parameterize other objects with different requests, queue or log requests, and support undoable operations
- Consider the operation of a restaurant
  - You, the Customer, give your Waitress an Order
  - The Waitress takes the Order to the kitchen and says “Order Up”
  - The Cook prepares your meal from the Order
    - Think of the order as making calls on the Cook like “makeBurger()”
- A request is given to one object but implemented by another one
  - This decouples the object making the request from the object that responds to the request

# Command's Structure and Roles



# Back to the analogy...

