

## Design Patterns cont.

## To date...

- Singleton
- Facade
- Bridge
- Strategy
- Adapter
- Composite

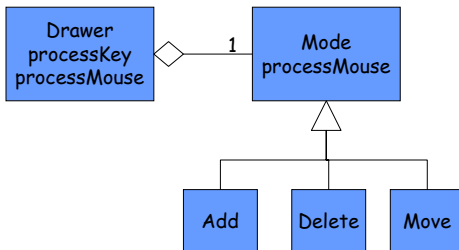
## Today

- State
- Command

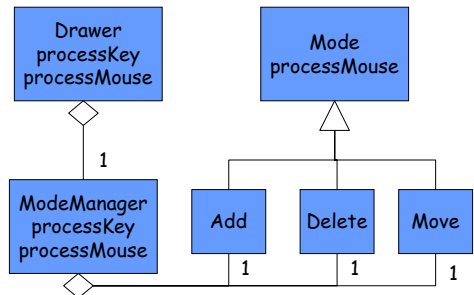
## Problem

- I am building a drawing program. The user enters keystrokes to change modes (Add, Delete, Move) and mouse input that is interpreted based on the current mode.
- Currently I use some global variables to record state information and long switch statements in my mouse and keyboard functions to process input. What is wrong with this picture?
- Come up with a better design.

State Design Pattern



State Design Pattern



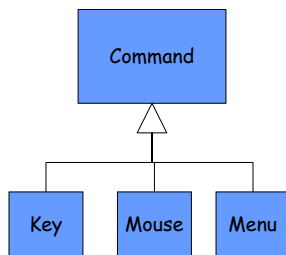
## Design Principles

Encapsulate variability.

Information expert: Responsibilities should be assigned to the class that has the information to handle the responsibility.

## Problem continued

- I also want to support "Undo"
- Help!



## Exercise

Choose three design patterns and propose ways you could have used them in (an improved version of) your golf game.