

CS 635 Advanced Object-Oriented Design & Programming  
Fall Semester, 2018  
Doc 7 Command Processor  
Mar 20, 2018

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# Command Processor Pattern

Command Processor manages the command objects

The command processor:

- Contains all command objects

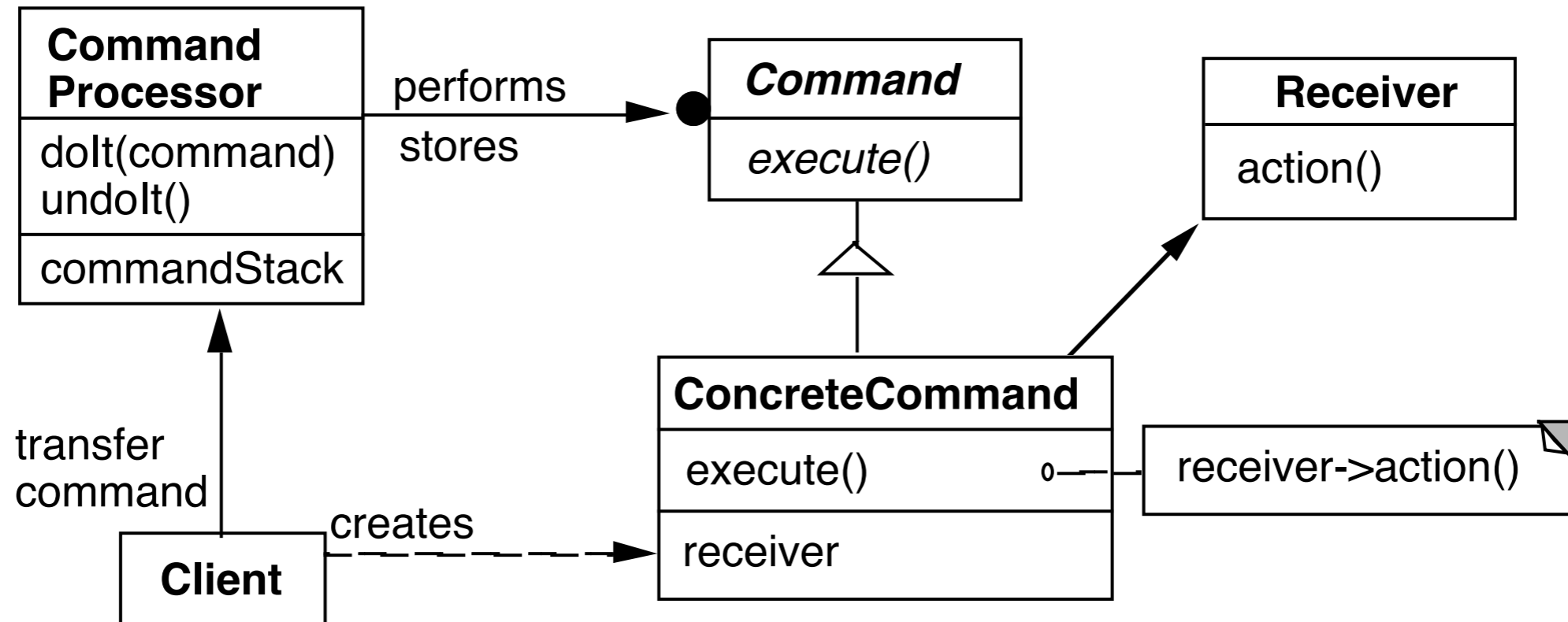
- Schedules the execution of commands

- May store the commands for later unto

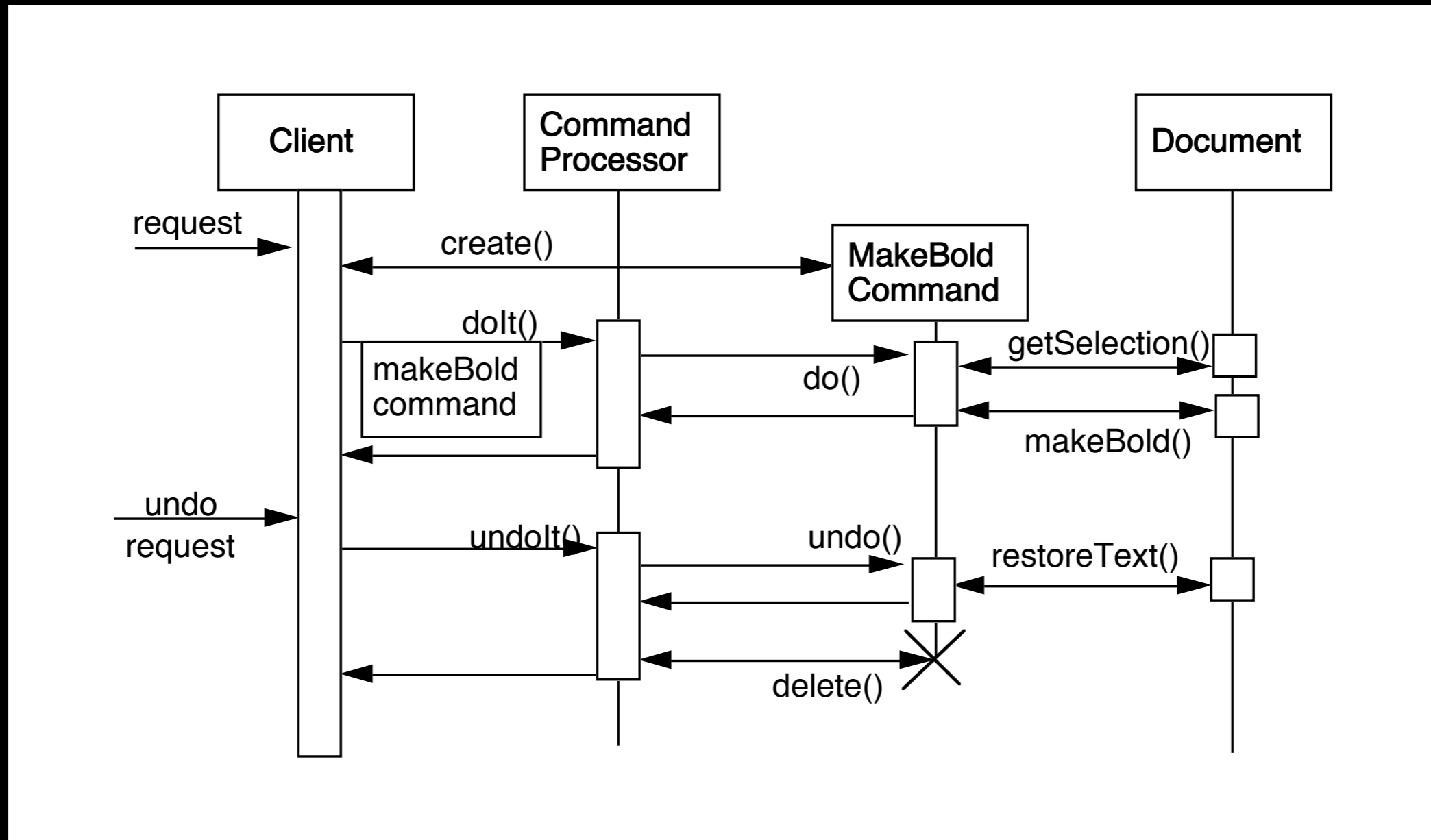
- May log the sequence of commands for testing purposes

- Uses singleton to insure only one instance

# Structure



# Dynamics



# Benefits

Flexibility in the way requests are activated

- Different user interface elements can generate the same kind of command object

- Allows the user to configure commands performed by a user interface element

Flexibility in the number and functionality of requests

- Adding new commands and providing for a macro language comes easy

Programming execution-related services

- Commands can be stored for later replay

- Commands can be logged

- Commands can be rolled back

Testability at application level

Concurrency

- Allows for the execution of commands in separate threads

# Liabilities

Efficiency loss

Potential for an excessive number of command classes

Try reducing the number of command classes by:

- Grouping commands around abstractions

- Unifying simple commands classes by passing the receiver object as a parameter

Complexity

How do commands get additional parameters they need?