

Interactr

Iteration 2

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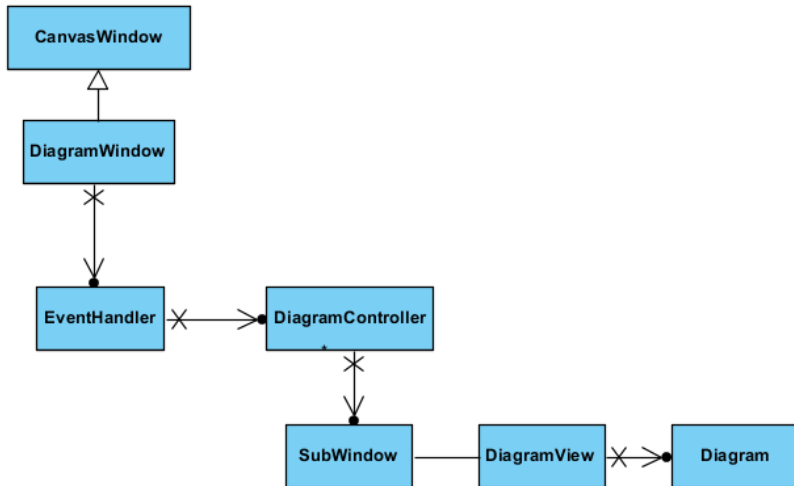
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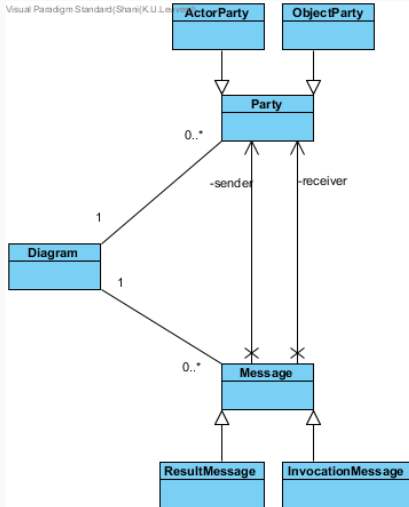
1. Design
2. Extensibility
3. Testing
4. Project Management

Design

Design - Typical Flow



Design - Domain Model (Mapping)



- Low representational gap
- Virtually nothing changed
- Prefixes fixed

Design - DiagramController

- Used to be quite central (managed Diagram itself)
- Now only keeps track of subwindows
- Each DiagramView manages the Diagram directly
- Synchronisation done with Observer pattern (see later)

Controller - Low Coupling

DiagramController uses sorted list of subwindows (drawn in reverse order)

- Class SubWindow
- Subwindows and views draw themselves (i.e. drawing is delegated)
- Use of clipping rectangle set on PaintBoard

Information Expert - Polymorphism

Pure Fabrication - Observer (GoF)

4 patterns :

- PaintBoard : Facade
- proposedFigure() : Factory Method
- DiagramNotificationCenter : Singleton & Observer

- Refactored here and there (eg. Extract Method in response to Duplication)
- Defensive programming - use of exceptions
- Everything is documented (informally)

Extensibility

3 methods considered :

- `DiagramObserver` interface with one method `diagramDidUpdate`, passing along the update type and associated parameters (in a dictionary)
- Keeping `SubWindow` and `DiagramView` in separate lists as observers
- `DiagramObserver` interface with methods with default implementations

Second method currently in use, last two methods similar in terms of extensibility. First method causes messy code with lots of `instanceof`.

Testing

Combination of :

- Recordings
- Step-by-step recordings
- Unit tests

Testing - Coverage

98% classes, 87% lines covered in package 'be'

Element	Class, %	Method, %	Line, %
domain	100% (8/8)	98% (53/54)	98% (187/189)
exceptions	100% (10/10)	100% (3/3)	100% (15/15)
purecollections	100% (27/27)	86% (137/158)	88% (367/416)
resources			
ui	96% (32/33)	87% (251/286)	85% (1067/1253)

Project Management

Project Management - Overview

- +- 50 hours per person
- Started early with design
- Code was nearly finished early on
- Last weeks were spent on refactoring and testing

Demonstration