

# Patterns : Observer

Byung-Joon Lee

[bjlee@etri.re.kr](mailto:bjlee@etri.re.kr)

<http://www.buggymind.com/>

# Observer Pattern

- The most basic and primitive pattern which is being used widely even without being noticed

# What is Pattern, Anyway?

- Pattern is a well-defined way of writing codes
- Goal:
  - How to achieve maximum manageability of codes?
- Keywords related with the concept of ‘Manageability of codes’
  - Extensibility
  - Simplicity
  - Isolation
  - Understandability
  - ...
- With pattern, you probably would follow development stages listed below:
  - List the requirements for your module (think in the viewpoint of your customers)
    - Input / output
    - Extensibility requirements
    - Performance requirements
  - Decide patterns which will guide you to the right way
  - Implement the patterns
  - Test the codes
  - Optimize the code to meet your performance requirements

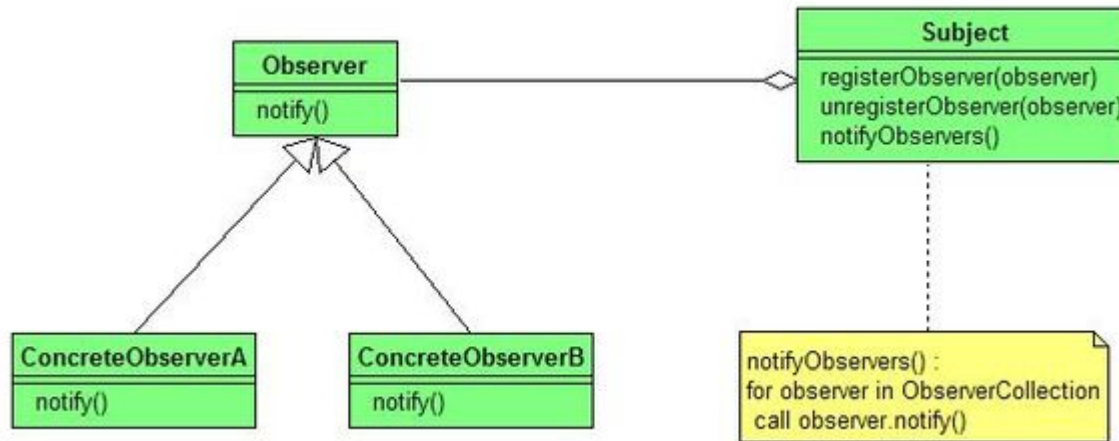
# Limits of the Patterns

- Patterns would not tell anything about the performances of your prototypes
- Patterns can only suggests you the ways that you can make your code more time-proof
  - For example,
    - What kind of change is really needed to meet your customer's changing requirements?
    - What kind of implementation techniques can help you to insulate your code from the changing demands coming from the customers?

# Customers

- When you decided to use patterns, that you should think in the viewpoint of your customers
- Then, what is ‘customer’ anyway?
  - Customer is a consumer which consumes the functionalities that your module provides with
  - So, in this context, the ‘customer’ is not a business term

# Observer Pattern



# Requirements for the observer pattern

- Requirements from the customers
  - Event notification is needed
  - To which the events should be notified cannot be determined at compile time
- Extensibility requirements
  - The codes of the consumers of the event should be isolated from the codes of the event provider
    - The consumer codes must be written using the interfaces of the event provider only
    - The event provider codes must be written using the interfaces of the event provider only
  - The event provider should have interface which allows consumers to register themselves as ‘event consumer’