



Application of Software Design Pattern

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Outline



- Uses of Observer Pattern
- Uses of Factory Pattern
- Uses of Singleton pattern
- How D.P Helps development

Observer Pattern



- One Server / Subject
- One/many clients / observers
- Client can subscribe anytime
- Client can de-subscribe anytime
- Server updates client as soon as it has an update



Observer Pattern in use

- I want my customers always get updated with my products
- RSS Feed
 - We add a feed in our feed reader and when RSS feed has an update, it appear in our reader automatically
- Implementing news server

Factory Pattern

The title 'Factory Pattern' is positioned at the top left. To its right, there are three circles: a solid light purple circle, an outlined light purple circle, and another solid light purple circle. Further to the right, there are three more circles: a solid light purple circle, an outlined light purple circle, and a final solid light purple circle.

- Factory pattern helps to create an object on creation time of a common subclass.

Factory Pattern in Use

The title is centered at the top of the slide. It is flanked by five circles of varying shades of purple and lavender. From left to right: a solid dark purple circle, a hollow light purple circle, a solid medium purple circle, a hollow light purple circle, and a solid dark purple circle.

- Avoiding the nested if ... else ... block to create object on condition.
 - To create random shapes (box ,circle , square , ...) in paint program.
 - To load different database tables on demand from user input

Singleton Pattern

The title 'Singleton Pattern' is positioned at the top left. To its right, there are five circles arranged horizontally. The first circle is solid light purple. The second circle is a light purple outline. The third circle is solid light purple. The fourth circle is a light purple outline. The fifth circle is solid light purple.

- Singleton helps to access an non sharable resource in a disciplined manner
 - Only one (or fixed number) object of a class (resource)

Singleton in Use



- Creating single database connection object
- Creation of non sharable code igniter base class
- Creation of non sharable JQuery base Class

How Design Pattern Helps Development

- DP show us how to build systems with good OO design qualities.
- Patterns are proven OO experiences.
- Pattern helps modularization
- Pattern provides a shared vocabulary.
- It increases development time by faster communication