

Abstract

The paradigm of object-oriented programming is how to represented real world into system so that it more focus on objects that involve in answering problem rather than only focus on how to solve the problem.

Design pattern and refactoring are the famous method in object-oriented programming which both of them objectived to produce a reliable software by applying pattern in their software implementation. From the way of using pattern, there is a huge difference between both of them, design pattern using pattern long before write any code but refactoring using pattern after a lot of code has been written.

Begin with the explicit statement from Martin Fowler which has been written on his Refactoring book about the possibility of natural relationship that connect pattern in design pattern with refactoring mechanism and unintentionally E.Gamma in other way endorse this statement on his Design Pattern manual book. Then this final project is performed to proving that explicit statement and bridges gap between refactoring and design pattern. The proving process is carried out by implement both of refactoring and design pattern on the same case-study. It is using the *Move Embellishment Refactoring* and *Decorator Pattern*.

The implementation result shows a structure similiarity between system build by *Move Embellishment* and build with *Decorator Pattern*.

Keywords: object-oriented programming, design pattern, refactoring, decorator, move embellishment