

## Abstract

Object Oriented Programming has been used by the developer. The Object Oriented Programming can implement all the shape and event in real world. But there still found a problem in Object Oriented Programming are how to make a design of Object Oriented Programming reusability and fleksibility. This problem is causes with the condition in the real world always changes, so the design application of Object Oriented Programming should be solve every changed.

In this final project, I will implement the Refactoring to get a structure pattern from the existing code, so that we can get the equality of pattern or sturcture with one of pattern in catalog GoF design pattern. That pattern is Abstract Factory design pattern that gives an interface for creating family from the relational object without spesification the concret class.

The parameterize equality of design pattern from Refactoring and design pattern in Abstract Factory pattern is looked from equality of notation interaction srtructure between class and object on the system. Although there are a different in implementation note with Abstract Factory pattern.

**Keywords:** object oriented programming, refactoring, pattern, abstract factory design pattern.