

## Abstract

Design pattern appears because of the same problem that usually appears at software design. There are many design patterns created by many programmers lately. Nowadays, design pattern is classified by three different purposes, they are creational, structural, and behavioral.

Factory Method Pattern is one of design patterns that belong to creational pattern purpose. Creational pattern is a design pattern that relates to creating object. Factory method pattern is used to decouple creating object process from another object that's supposed to utilize the object created. This is done to prevent product class change affects client's code change. At least, the affection can be minimized and the factory can be used by many classes.

In this Final Assignment, a software is created to implement factory method pattern in problem solving. To evaluate factory method pattern, object-oriented metrics is used to measure object oriented software particularly. The result of this measure then compared to result from another experiment that doesn't implement factory method pattern. At last, we get a conclusion about both quality in matter of reusability.

Based on this experiment, it is proved that software with factory method pattern has better reusability than another software without it. This causes software with factory method pattern based will be easier to develop than software without factory method pattern.

**Key words:** design pattern, factory method pattern, reusability, and object-oriented metrics.