

## Abstract

Design pattern was invented because there are similar problems that often appeared in the software engineering. There are a lot of design patterns was invented by programmers in its development. Today, design pattern is clustered by three different purposes, there are creational, structural, and behavioral.

Observer pattern is one of behavioral pattern. Observer pattern was invented because there is many condition where one state need to be broadcasted to other objects, in simply term it's called broadcast communicatin . This Pattern allows one object to send their state to another objects with low coupling.

This final assignment will implement observer pattern to finish a case that need broadcast communication. For evaluate observer pattern, this final assignment will test and calculate object-oriented metrics from software of observer pattern. Whereas to know the strength and weaknesses of observer pattern, the result of object-oriented metrics observer pattern's software will compare with non observer pattern's software in same case study.

**Keywords:** design pattern, observer pattern, and object-oriented metrics.