

## Abstract

Nowadays, the need of software has been appreciably increasing but unfortunately it isn't followed by the level of users' confidence. They consider that software still need developing in order to eliminate security problems. For your information, many developers still don't recognize how important the software security is, and they are too focused on software functionality aspect. Moreover, they left software security as a crucial aspect.

Design patterns were first introduced as a way of identifying and presenting solutions to reoccurring problems in object oriented programming (OOP). This solution would help developer on developing software. Security design pattern are method which to adapt design patterns approach for solution reoccurring information security problem.

In this final project, the writer would implement security design pattern to such a case study, the application of online learning. This project would be analyzed whether security design pattern would match within the development of software security. The first thing that the writer begins to analyze is comparing software which it hasn't been implemented. As a result, this project is going to convey that the implementation of security design pattern make software more secure to vulnerability. Furthermore, implementation Security design pattern have several advantage for developer for instance reusability improvement and enable to integrate security aspect into system design.

**Keywords:** OOP, design pattern, security design pattern, vulnerability, security.