Abstract

It’s common among developers when they start coding for an application, a specific design pattern not found in the road map of development and it becomes a vulnerable point to exploit. Applications developed without design pattern difficult to change and understand. It is possible to reduce vulnerability at minimum level and it results in the reduction of maintenance cost. An application was developed for this paper using design patterns, two pages visitor information page and school member verification form were build using Factory design pattern and Interpreter design patter. SFDP and SIDP are the two secured design patterns proposed for making application secure and more reliable than before using encryption-decryption hashing algorithm encoding scheme. The points expressed in proposed model clearly explain the expected vulnerable points. A secure design will keep application more reliable and available as it was before.

**Index Terms**

Computer Science

Security
Keywords

Software design patterns; vulnerability; security pattern; refactoring; secure software design; secure pattern.