Design Patterns for Online Shopping System

A dissertation submitted to The University of Manchester for the degree
of Master of Science in Information System Engineering

2010
CHENG CHEN

SCHOOL OF COMPUTER SCIENCE
Abstract

Design pattern is a general solution to solve common problems during the process of software design. The purpose of using design patterns in the process of software design and development is to make full use of existing successful development experience. They are summarized by former developers. They are successful architecture, design and implementation strategies. By realizing these design patterns, people can make use of successful design and architecture easily and the process of design becomes fairly more convenient. Using design patterns flexibly can solve the existing problems of maintenance and reusability of software. The most important goal of design patterns is to build an extensible solution for software systems.

Firstly, the basic theory of design pattern is introduced. The features, classifications and principles of design patterns are introduced.

Secondly, this dissertation gives in-depth information about applying design patterns. Based on analyzing relationship among design pattern and component technologies, framework and structure, an applicability proposal is being presented.

Finally, based on the project of Online shopping System, the advantages of applying design patterns in the process of design are represented clearly.
When design patterns are used correctly and flexibly in the development of software systems, they can effectively reduce even avoid duplication of design, improve reliability, reusability and maintainability of system architecture. They also reduce the development cycle.