9 Design

Learning outcomes

The material and exercises in this chapter will enable you to:

- Recognize the difference between analysis and design
- Explain the role and purpose of a layered architecture in an object-oriented system
- Draw a simple component diagram
- Draw a simple deployment diagram
- Design a simple user interface
- Explain the difference between an object-oriented and a relational database
- Understand how to link an object-oriented program to a relational database
- Be able to convert a simple class diagram into a set of relational database tables
- Apply a simple design pattern.

Key words you will find in the glossary:

- architecture
- boundary class
- collection class
- component
- component diagram
- control class
- dependency
- deployment diagram
- design pattern
- domain class
- entity class
- foreign key
- hardware platform
- implementation-independent
- JDBC (Java database connectivity)
- layered architecture
- object-oriented database
- package
- presentation layer
- primary key
- relational database
- software platform
- subsystem
- user interface
- visibility