

CSE6214 Software Engineering Fundamentals

Tutorial 6

Part A: Discussion

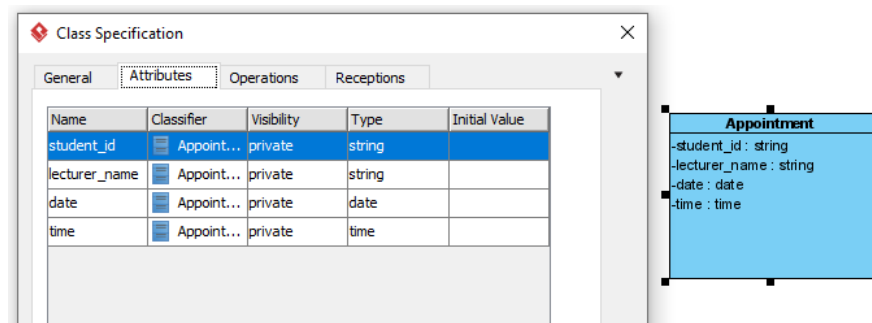
Topic (Lecture 6): Design Modelling 1

1. Using architecture of a house or building as a metaphor, draw comparisons with software architecture. What are the similarities and differences?
2. Briefly describe each of the four elements of the design model.
3. Select a few diagrams from the design model. For each diagram, describe the possible sources of its contents from the analysis model.
4. Present two or three examples of applications for each of the architectural styles given in Lecture 6.
5. Explain the terms *architectural style*, *architectural pattern*, and *framework* in relation to software architecture.

Part B: Project

Task: Data Design

1. Based on the Sequence Diagrams in Tutorial 5, verify that the Class Diagram contains the data objects that are being processed in the use cases. Use Visual Paradigm to update the attributes in the Class Diagram with suitable data types. (Right-click the class, Open Specification and click the Attributes tab. See example below)



2. Prepare a set of sample data that can be used in the use cases. The data could be entered into the system and/or displayed by the system.

3. Using the Class Diagram, create the database using Microsoft Access. Refer to the following webpage on how to create databases from class diagrams:

https://www.youtube.com/watch?v=u_G9Wx5Hr5Y

4. Enter the sample data into the database tables and discuss with the tutor the processes that use the data in these tables.