DayCare Project Technical Summary

Model-View-Controller:

In the ‘View’ part, we design the basic Java GUI. And then we code in the ‘Controller’ part for interaction between user and GUI, for example, we add action listener in ‘controller.java’. In the ‘Model’ part, we add CRUD Dao and use data access object to control database.

Swing (SwingX):

Using Swing to design Java GUI for Day Care Application dashboard. And the software we use is NetBeans or IntelliJ IDEA.

CI&CD:

Align Software Development.

Gradle (Package Dependency Management):

Gradle helps us to use dependency jar packages and libraries.

SQLite (JDBI, JDBC, Reflection):

Using the DB Browser for SQLite to modify contents in database and using JDBI (a convenience library built on top of JDBC) for Java Database Connectivity. With reflection in Java, we do not need to interact with SQLite.

Guava:

Java modern library, which can simplify codes.

CRUD Dao:

Using Generic to solve typecasting problem. When running the code, it can infer object type.

What we do?

We design an application for parents and teachers to monitor the students’ health. Discussing through Zoom and Notion, we architect the system through MVC frame. Using Java/JavaBeans, Database and csvData, we achieve CRUD of the data about students/teachers/parents. Besides the basic GUI for this application, in dashboard, we design a JChart to accomplish the auto statics of students’ information. Also, the codes can be achieved in GitHub.

What is different?

Reflection, Dao (Generics), CI&CD.