

BankSimulator

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Information Technology, Software Development

Introduction

This document is a project poster of TVT19KMO team number 5. The project is part of a software engineer study plan.

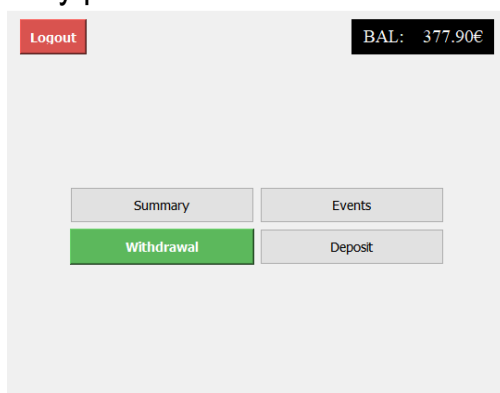


FIGURE 1. The main view of the interface

Objectives

The project team aimed to develop software used to simulate the functionality of the ATM. The software connects to the database of the bank service and provides an interface to the bank account of the user identified by ID-card number and PIN-code. After reading the card and entering the PIN, user is able to withdraw or deposit money and also view previous account events.

Methods

The software was written in C++ language, using the utilities and libraries provided by Qt Creator program development environment.

Qt Creator was also used to communicate with the external database by using its SQL API. Database tables were developed using MYSQL-Workbench.

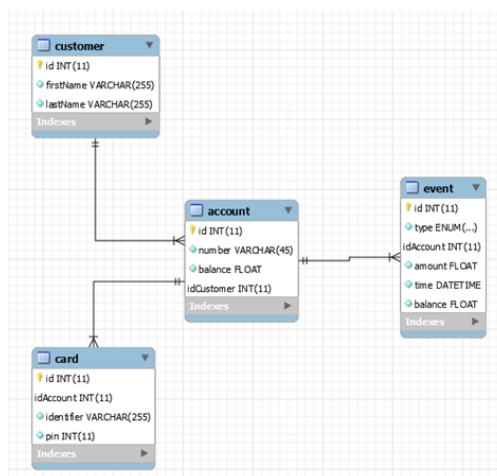


FIGURE 2. Database tables and connections

Other project diagrams were developed with StarUML for designing purposes.

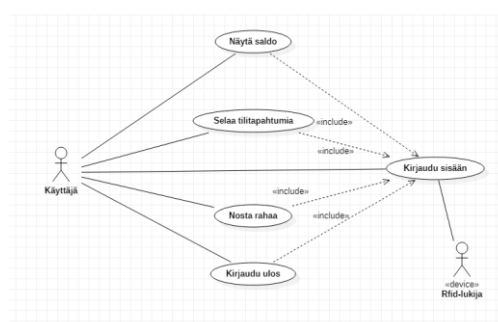


Figure 3. Use-case diagram

Id-card was read by using RFID-reader which was provided by school. RFID-reader was connected to computer through USB-port. The technical and functional operations of the project were well documented by using Microsoft Word.

Everything related to the project was uploaded to GitHub. Discord platform was used in communication.

Results

The project was finished in time, and every expectation was met. The software works as it is supposed to. The user can login to the bank interface by providing a valid bank card and PIN-code. After logging in, the user can perform the specific ATM operations.

Conclusions

The project offered an excellent insight into the documentation and the whole development process. It also provided a great overview about the Qt Application framework.

References

1. GitHub of the project
<https://github.com/JIkaheimo/ohjelmi-stokehityksen-sovellusprojekti-2k19>
2. RFID-reader used in the project
<https://www.olimex.com/Products/Modules/RFID/MOD-RFID125-BOX/>
3. Qt creator
<https://www.qt.io/development-tools>
4. MYSQL-Workbench
<https://www.mysql.com/products/workbench/>
5. StarUML
<http://staruml.io/>