

BankSimul_1300

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Information Technology, Software Development

Introduction

The aim of the project was to make a demo version of the ATM machine ordered by the customer. The phases of the project included the preliminary research phase, definition, design, implementation, integration and testing and as well deployment. The project was initiated by first preparing a preliminary research document and then approving the project contract.

After the project agreement, the defining phase was used to examine which functionalities in the demo version should be made and tested. During the design phase, the project was split into small user interfaces and small functionalities, and they were shared. At the implementation stage, the ready-made components were combined and tested slightly when it was ready.

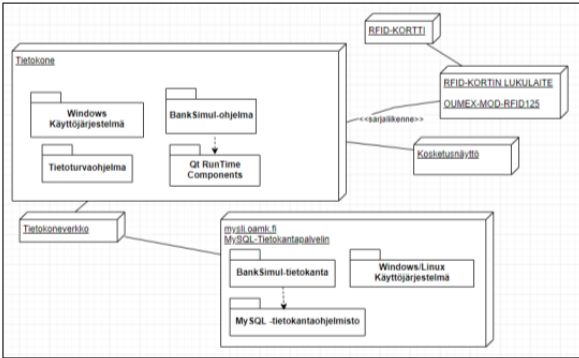


FIGURE 1. System architecture

Objectives

Demo version wanted to be able to make money withdrawals, view account transactions, and donate money to automated defined charity accounts.

Methods

The ATM automation project was started by creating a database for the server. Subsequently, a dedicated DLL file "DLLMySQL.dll" was implemented for database queries and updates. My DLL files were also implemented for the pin-code query and the RFID card reader. These were then introduced in conjunction with the functionality of the user interface files and program files. The application was implemented using the Qt development environment.

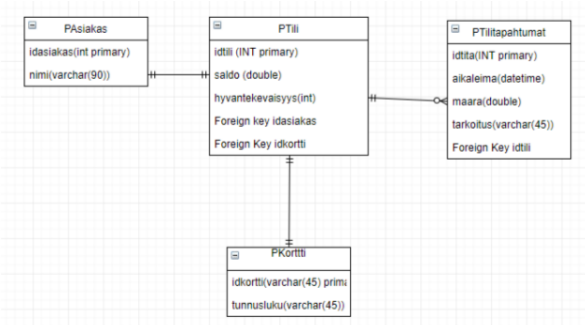


FIGURE 2. Entity-Relationship model

Results



FIGURE 3. The main User Interface

Conclusions

It has been interesting to divide tasks into small parts and ultimately to integrate them into one great program. It has been interesting to do the project in strict accordance with previously defined specifications and specification documents. It is easier to achieve the goals when the project can rely on accurately defined definitions and the project can not be expanded according to imagination. It is also easier to work with project with very different people and with different experience when the project has precise definitions of what and how to do it.

References

Development environment:
<https://www.qt.io/>
RFID:
<https://fi.wikipedia.org/wiki/RFID>