Project Report

ATM Interface Console-Based Application

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Project Overview

The goal of this project was to create an ATM interface console-based application that allows users to access their bank accounts and carry out various banking transactions such as withdrawals, deposits, and transfers. The project consisted of five different classes: Account Holder, Account, Bank Transaction, Bank, and ATM.

Requirements

The following requirements were identified for the project:

1. The application must allow users to enter their user ID and PIN to access their bank account.
2. The application must provide users with the ability to carry out transactions such as withdrawals, deposits, and transfers.
3. The application must maintain a transaction history for each account.
4. The application must be secure and protect user information.
5. The application must be user-friendly and easy to navigate.

Design

The design of the application was based on the Model-View-Controller (MVC) architectural pattern. The Account class represented the model, the ATM class represented the view, and the Bank class represented the controller.

The application consisted of a main interface that allowed users to enter their user ID and PIN to access their account. Once logged in, users could select from a variety of transactions to carry out, such as withdrawing money, depositing money, transferring money, and viewing their transaction history.

Implementation

The application was implemented in Java using the Eclipse Integrated Development Environment (IDE). The following libraries were used:

- JavaFX for the user interface
- JUnit for unit testing
- Log4j for logging

The application was tested extensively to ensure that all requirements were met and that the application was functioning as expected. Unit tests were written for each of the classes to ensure that they were working as intended.

Conclusion

Overall, the ATM interface console-based application was successfully implemented and met all of the project requirements. The application was designed with security and user-friendliness in mind and was thoroughly tested to ensure that it was functioning properly. Future improvements could include adding more features such as account creation and additional security measures.