ATM Interface Using Python & MySQL - Project Report

Title : ATM Interface Using Python & MySQL

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# Objective

To develop a simple ATM simulation program using Python integrated with a MySQL database to perform account-related operations such as login, balance inquiry, withdrawal, deposit, and password update.

# Modules Used

- `mysql.connector` for connecting and executing queries on the MySQL database

- `Error` from `mysql.connector` for error handling during database operations

- Built-in Python functions like `input()`, `print()`, and control flow statements

# Functionalities

1. Login using ATM card number and PIN

2. Check account balance

3. Deposit money into account

4. Withdraw money from account

5. Change PIN

6. Exit the application

# Database Handling

Account information is stored in a MySQL database named `user`, within a table called `users`. The application performs SQL operations to retrieve and update account details in real-time.

Operations include:

- Authenticating user login via card number and password

- Fetching current account balance

- Updating balance after deposits or withdrawals

- Changing the user’s PIN

# Conclusion

This project demonstrates practical knowledge of Python programming, MySQL integration, and real-time data handling. By replacing flat file storage with a relational database, the system offers improved data integrity, security, and scalability. This implementation can be extended with GUI support, transaction history, and PIN encryption to simulate a complete banking system.