amdocs

make it amazing

Banking Management System in Python

By Yashvardhan Bhise

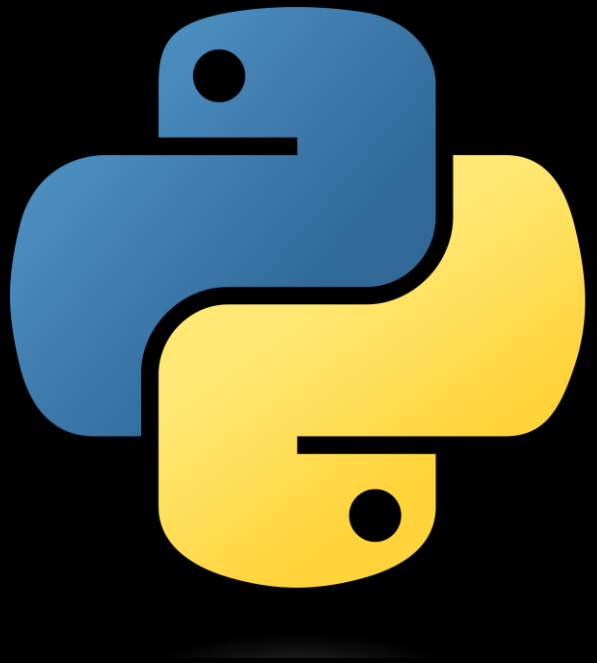
What Are We Covering

- Basic Project Overview
- Technologies Used
- Key Components
- Output

Basic Overview

- A Python script implementing a basic banking system.
- Utilizes MySQL for data storage and retrieval.
- Core functionalities include account creation, authentication, balance inquiries, withdrawals, deposits, and transaction history.

Technologies Used



Key Components

1. **Database Initialization (create_database)**
   - Ensures the existence of the required MySQL database and tables.
   - Creates the 'banking_system' database if not present.
   - Defines 'accounts' and 'transactions' tables for storing user data and transactions.
2. **Database Connection (connect_to_database)**
   - Establishes a connection to the MySQL database.
   - Returns the database connection object.
3. **Account Creation (create_account)**
   - Enables users to create a new bank account.
   - Collects user details such as name, account number, password, and initial balance.
   - Inserts the account details into the 'accounts' table.
4. **Authentication (authenticate_user)**
   - Validates user credentials based on account number and password.
   - Grants access and returns the account holder's name upon successful authentication.

Cont.

5.Balance Inquiry (fetch_balance)
- Displays the current account balance for authenticated users.
- Retrieves and prints the balance from the 'accounts' table.

6.Withdrawal (withdraw_amount)
- Allows users to withdraw funds from their account.
- Verifies sufficient funds, updates the balance, and records the transaction.

7.Deposit (deposit_amount)
- Permits users to deposit funds into their account.
- Updates the balance and records the transaction.

8.Transaction History (view_account_statement)
- Shows a statement of all transactions for authenticated users.
- Retrieves and prints transaction details from the 'transactions' table.

9.Cursor Usage
- Utilizes cursor objects for executing SQL queries and fetching results.
- Essential for database interactions, allowin script-database communication through the MySQL connector.

Functionalities

1. View Balance
2. Withdraw
3. Deposit
4. View Account Statement
5. Logout