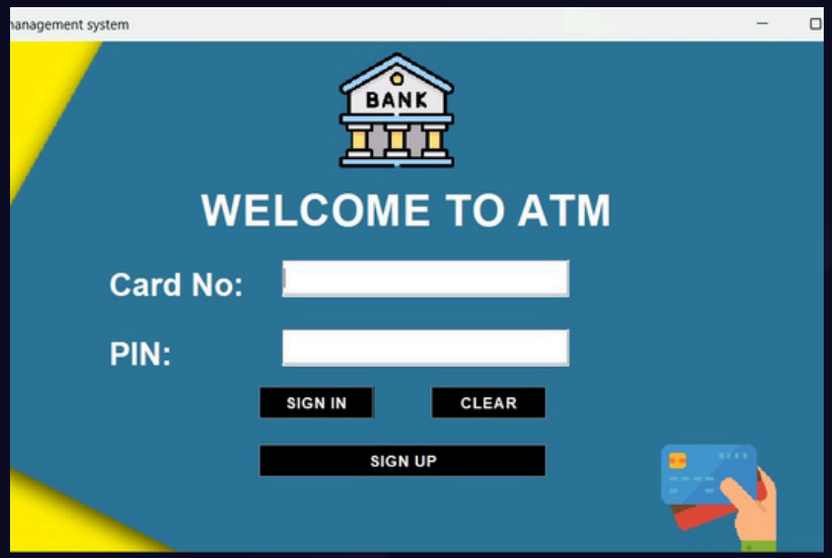
Bank Management System: A Java Swing Application

This Java-based desktop application simplifies bank operations. It uses Swing for the GUI and MySQL for the database. Users can sign up, log in, deposit, withdraw, and check balances. This project showcases Java OOP, GUI design, and database connectivity. Our goal is to create a seamless banking experience.



Login Class: User Authentication

1 **Handle Authentication**

Verifies user credentials against the MySQL database securely.

2 **GUI for Login**

Features text fields for username and password, with a login button.

3 **Secure Data Handling**

Includes password encryption for enhanced security.

4 **Access Control**

Grants application access upon valid credentials.

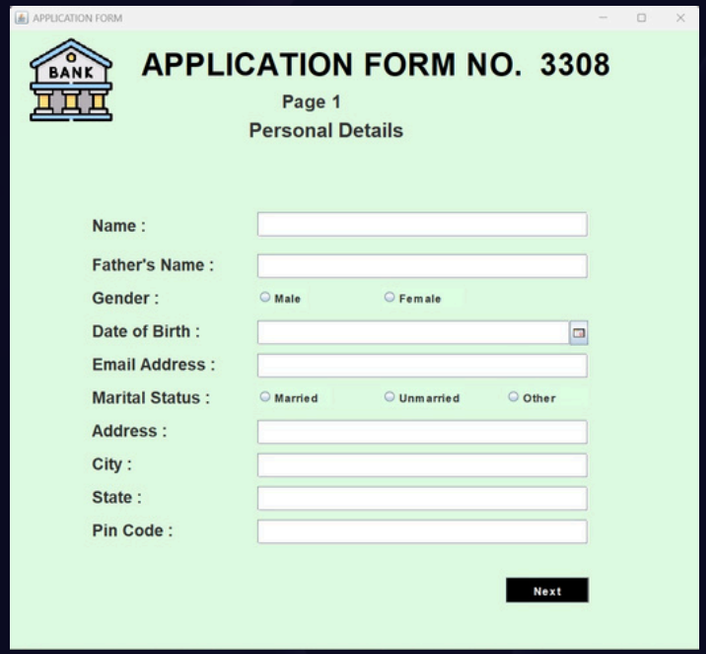
Signup Class: New User Registration

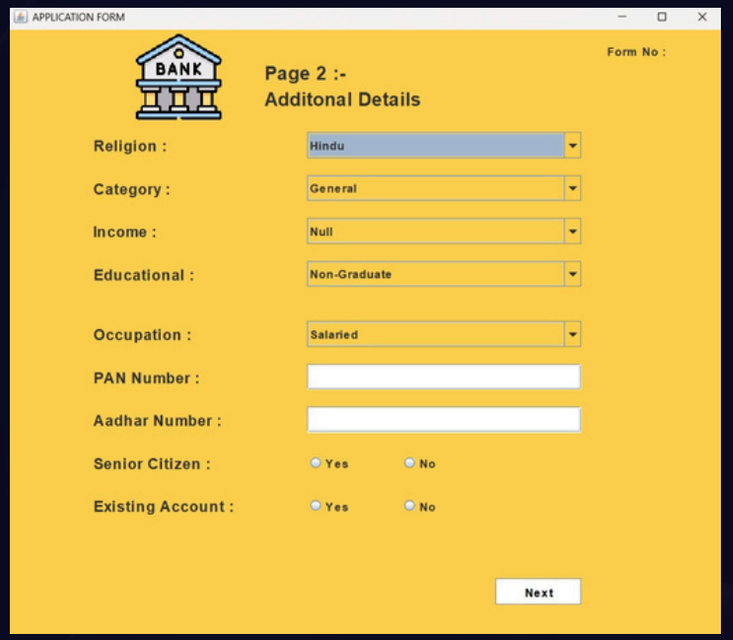
Enable Registration
Allows new users to create accounts easily.

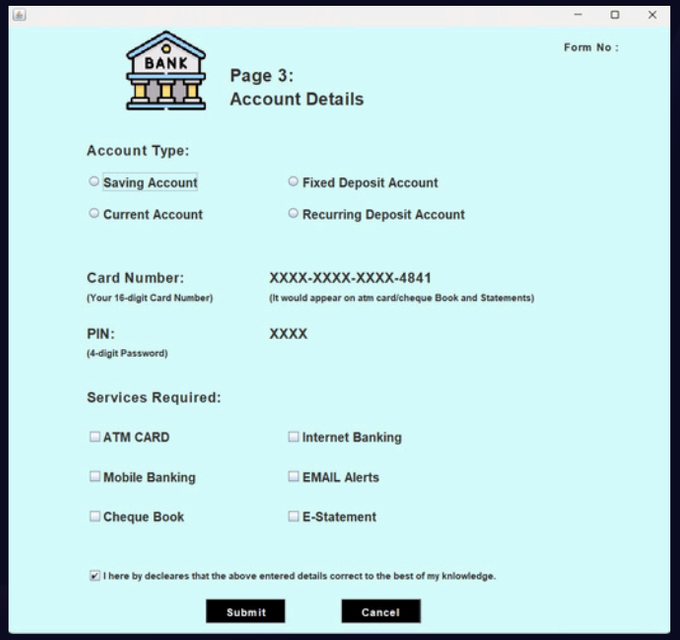
Collect Details
Gathers personal information and security questions.

Secure Storage
Stores user data securely in the MySQL database.

Validate Inputs
Ensures all entered data is valid and correct.







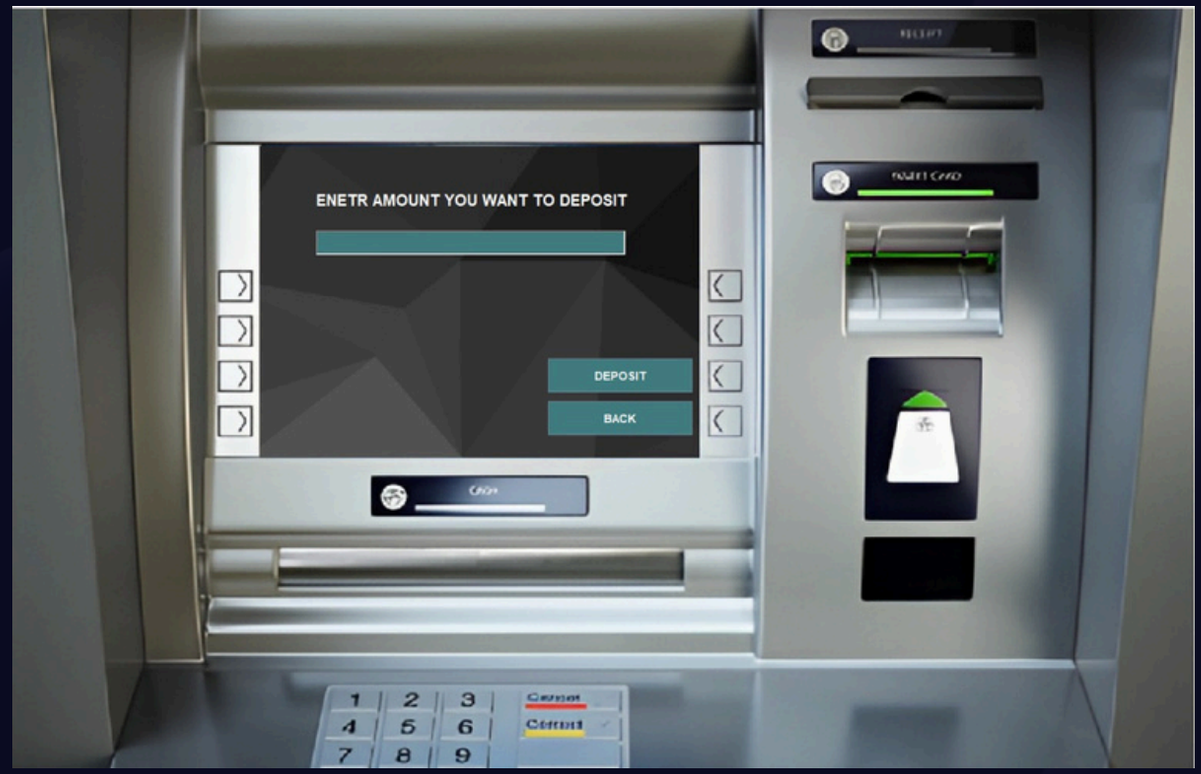
Deposit Class: Fund Deposits

Enter Amount
User inputs the desired deposit amount.

Validate Input
Ensures the entered amount is valid.

Update Balance
Account balance is updated in the database.

Confirm Transaction
Provides confirmation for the successful deposit.



FastCash Class: Quick Withdrawals

Predefined Amounts
Offers quick withdrawal buttons for common amounts.

Instant Balance Update
Updates account balance immediately after withdrawal.

Transaction Limits
Enforces daily and per-transaction limits for security.

Streamlined Workflow
Simplifies withdrawals for user convenience.

BalanceEnquiry Class: Account Balance Check

User Request

User initiates a balance inquiry.

Retrieve Data

Account balance is fetched from the MySQL database.

Display Balance

The current balance is shown on the GUI in real-time.

Conclusion: Key Benefits and Future Enhancements

Key Benefits

- Secure banking operations ensured. User-friendly GUI for easy navigation. Efficient database management system.

Future Enhancements

- Integrate mobile banking features. Implement advanced security protocols. Add more banking services and options.

```java
package BankManagementSystem;

import java.sql.*;

public class Connn {
    Connection connection;  2 usages
    Statement statement;  17 usages
    public Connn(){
        try{
            connection = DriverManager.getConnection( url: "jdbc:mysql://localhost:3306/bankSystem",
                    user: "root", password: "Mohit123");
            statement = connection.createStatement();
        }catch (Exception e){
            e.printStackTrace();
        }
```

```sql
use bankingSystem;
create table signup(form_no varchar (38), name varchar (100), father_name varchar(100), gend
select * from signup;


create table signuptwo(form_no varchar (38), Religion varchar (100), Category varchar(100),
select * from signuptwo;

create table signupthree(form_no varchar (38),account_type varchar(30),card_number varchar(3
select * from signupthree;

create table login(form_no varchar(30),card_number varchar(30),pin varchar(30));
select * from login;

create table bank(pin varchar(10),date varchar(60),type varchar(30),amount varchar(20));
select * from bank;
```


Thank You