PyBank ATM System - Project Report

Introduction

This project, PyBank ATM System, is a GUI-based ATM simulation built using Python and Tkinter. It allows users to log in securely using a 4-digit PIN, check their balance, deposit and withdraw money, view a mini statement, and change their PIN.

Objectives

• Create a user-friendly ATM interface.
• Implement secure login using PIN authentication.
• Allow basic banking operations such as deposit, withdrawal, and balance check.
• Maintain user data and update balances persistently using a users.txt file.
• Provide a simple mini-statement feature for recent transactions.

Technology Used

• Python 3
• Tkinter for Graphical User Interface
• File Handling (TXT file) for storing user information

Working of the Project

1. The program loads users from users.txt. If the file does not exist, it automatically creates 50 users.
2. A user logs in using a 4-digit PIN. Incorrect PIN shows an error message.
3. After logging in, a user can:
• Check account balance
• Deposit money
• Withdraw money (if funds are sufficient)
• View last five transactions
• Change PIN securely
4. All updates are instantly saved to users.txt.

GUI Description

The interface uses Tkinter frames, buttons, labels, and input fields. The layout is clean and modern with separate sections for login, balance, transactions, and PIN updates.

Conclusion

The PyBank ATM System demonstrates Python GUI development, banking logic, and file handling. It is ideal for students learning Tkinter and real-world project building.