

Code Report

Overview

This C++ program simulates a basic ATM system with features like withdrawal, deposit, balance checking, and PIN verification. It incorporates colorful text output for a more engaging user experience.

Key Components

1. Color Printing :

Uses ANSI escape codes to print colored text.

Implemented in the printColored function.

2. Screen Clearing:

Crossplatform implementation to clear the console screen.

Uses conditional compilation directives for Windows and Unixlike systems.

3. Money Class:

Manages account balance and transactions.

Provides methods for withdrawal, deposit, and balance checking.

4. Security Class:

Handles PIN verification with a maximum of 5 attempts.

Implements a simple security measure to block transactions after too many failed attempts.

5. User Interface Functions:

displayWelcomeScreen(): Shows a colorful welcome message.

displayMenu(): Presents the main ATM menu options.

6. Main Program Logic:

- Initializes the ATM session.

- Prompts for PIN verification.

- Enters a loop to handle user choices until exit is selected.

Features and Enhancements

1. Colorful Output:

- Uses different colors for various elements (title, menu, prompts, success/failure messages).

- Improves readability and user engagement.

2. PIN Verification:

- Allows up to 5 incorrect PIN entries before blocking the transaction.

- Provides feedback on remaining attempts.

3. Transaction Handling:

- Supports withdrawal and deposit operations.

- Checks for sufficient funds during withdrawal attempts.

4. Balance Checking:

- Allows users to view their current account balance.

5. UserFriendly Interface:

- Clear menu options and prompts guide the user through the ATM process.

- Provides feedback on successful transactions and errors.

6. CrossPlatform Compatibility:

- Uses conditional compilation to ensure screen clearing works on both Windows and Unixlike systems.

Conclusion

This ATM simulation program provides a solid foundation for understanding objectoriented programming concepts and implementing a simple banking system. Its colorful interface enhances user experience, and the PIN verification adds a layer of security. With potential improvements in mind, this code can serve as a starting point for more complex banking applications or educational projects.