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Mini project

Group Lab Assignment 1 ATM Mini Project
This assignment must be completed in groups of 3 students. Work collaboratively to design, implement, and
test an **ATM Mini Project** in Java. Each member should contribute to planning, coding, and testing.

Instructions:

- Predefined PIN = 1234. User has 3 attempts using a for loop.
- If wrong 3 times → locked.
- After login, show menu (while loop):

a) Deposit
b) Withdraw
c) Check Balance
d) Exit

- Implement methods:

a) deposit (int amount) → balance increases if amount > 0.
b) withdraw (int amount) → decreases balance if enough funds.
c) checkBalance () → prints current balance.
• Use input validation (no negative deposits/withdrawals).
• Use continue for invalid options, break to exit.
Sample ResultEnter PIN: 0000
Wrong PIN! Attempts left: 2
Enter PIN: 1234
Login successful!
==== ATM Menu ====
1) Deposit
2) Withdraw
3) Check Balance
4) Exit
Choice: 1
Enter amount to deposit: -50

Invalid amount! Try again.
Choice: 1
Enter amount to deposit: 200
Deposit successful.
Choice: 2
Enter amount to withdraw: 500
Insufficient balance!
Choice: 3
Your balance is: 200
Choice: 4
Thank you for using the ATM. Goodbye!

```
package com.mycompany.ammar;

import java.util.Scanner;


public class ATM_project  {


   int balance = 0; // initial balance


   // Deposit method
   void deposit(int amount) {
      if (amount > 0) {
         balance += amount;
         System.out.println("Deposited: " + amount);
      } else {
         System.out.println("Invalid deposit amount!");
      }
   }


   // Withdraw method
```

```
void withdraw(int amount) {
    if (amount > 0 && amount <= balance) {
        balance -= amount;
        System.out.println("Withdrawn: " + amount);
    } else if (amount > balance) {
        System.out.println("Insufficient funds!");
    } else {
        System.out.println("Invalid withdraw amount!");
    }
}

// Check balance method
void checkBalance() {
    System.out.println("Your Balance = " + balance);
}

public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    ATM_project atm = new ATM_project();
    int pin = 1234;
    boolean loggedIn = false;

    // 3 attempts for PIN
```

```
for (int i = 1; i <= 3; i++) {
   System.out.print("Enter PIN: ");
   int enteredPin = sc.nextInt();
   if (enteredPin == pin) {
      loggedIn = true;
      break;
   } else {
      System.out.println("Wrong PIN! Attempts left: " + (3 - i));
   }
}

if (!loggedIn) {
   System.out.println("Account locked due to 3 wrong attempts.");
   return;
}

// Menu after login
while (true) {
   System.out.println("\nATM Menu:");
   System.out.println("1. Deposit");
   System.out.println("2. Withdraw");
   System.out.println("3. Check Balance");
   System.out.println("4. Exit");
```

```
System.out.print("Choose option: ");
int choice = sc.nextInt();


switch (choice) {
   case 1:
      System.out.print("Enter amount to deposit: ");
      int dep = sc.nextInt();
      atm.deposit(dep);
      break;
   case 2:
      System.out.print("Enter amount to withdraw: ");
      int wd = sc.nextInt();
      atm.withdraw(wd);
      break;
   case 3:
      atm.checkBalance();
      break;
   case 4:
      System.out.println("Thank you for using ATM. Goodbye!");
      sc.close();
      return;
   default:
      System.out.println("Invalid choice!");
```

```
        }
      }
    }
  }
```