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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


void deposit(int amount) {

if (amount > 0) {

balance += amount;

          System.out.println("Deposited: " + amount);

       } else {

          System.out.println("Invalid deposit amount!");

       }

   }
```

```
   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          System.out.println("Withdrawn: " + amount);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!");
       }
   }
 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;

       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;
    }

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!");
            }
        }
    }
}
```