

Problem 2: ATM Withdrawal System (Medium Level)

Description:

Simulate an **ATM withdrawal system**:

- Ask the user to **enter PIN**
- Allow withdrawal if the **PIN is correct and balance is sufficient**
- Throw exceptions for **invalid PIN or insufficient balance**
- Ensure the system **always displays the remaining balance** even after an exception.

Code:

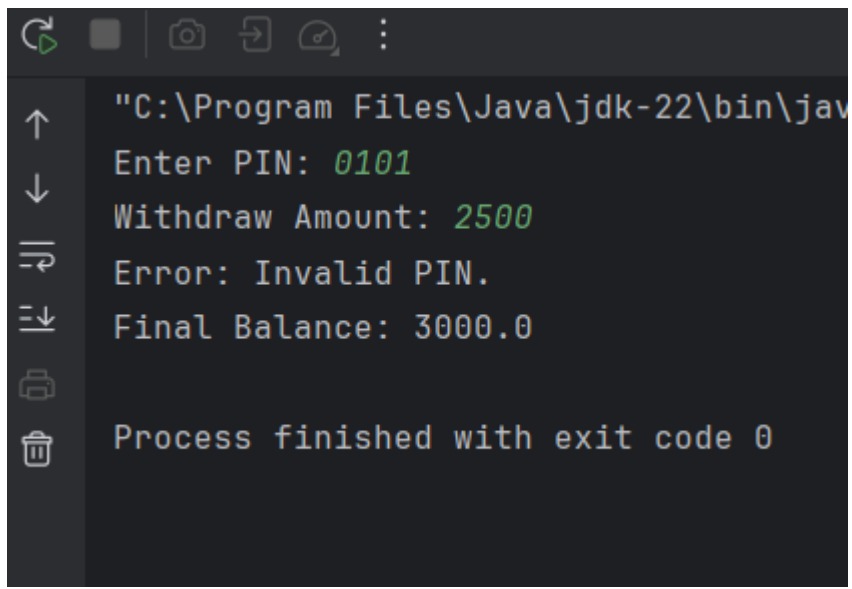
```
import java.util.Scanner;

class ATM {
    private int correctPIN = 1234;
    private double balance = 3000;

    public void withdraw(int pin, double amount) throws Exception {
        if (pin != correctPIN) {
            throw new Exception("Error: Invalid PIN.");
        }
        if (amount > balance) {
            throw new Exception("Error: Insufficient balance. Current
Balance: " + balance);
        }
        balance -= amount;
        System.out.println("Withdrawal Successful. Remaining Balance: " +
balance);
    }

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        ATM atm = new ATM();
        System.out.print("Enter PIN: ");
        int pin = scanner.nextInt();
        System.out.print("Withdraw Amount: ");
        double amount = scanner.nextDouble();
        try {
            atm.withdraw(pin, amount);
        } catch (Exception e) {
            System.out.println(e.getMessage());
        } finally {
            System.out.println("Final Balance: " + atm.balance);
        }
    }
}
```

Output:



```
"C:\Program Files\Java\jdk-22\bin\jav
Enter PIN: 0101
Withdraw Amount: 2500
Error: Invalid PIN.
Final Balance: 3000.0
Process finished with exit code 0
```

The screenshot shows a terminal window with a dark background. On the left side, there is a vertical toolbar with icons for running, stepping through, and other debugging actions. The terminal output shows the execution of a Java program. The first line is the command prompt showing the path to the Java executable. The subsequent lines show the program's output: "Enter PIN: 0101", "Withdraw Amount: 2500", "Error: Invalid PIN.", and "Final Balance: 3000.0". The final line indicates that the process finished with exit code 0.