Lab – ATM Machine

We are going to create a program that simulates an ATM machine. Features of our ATM machine include:

- User/PIN security—users must enter in a valid user/pin combination to access their account
- Balance information—users may access their account balance
- Check deposit—users may deposit multiple checks at one time
- Money withdrawl—users may withdraw money in increments of $20

Account Security:
1) In order to get started, we will first need to create a user/pin combination that allows users to login. We will do that by creating a couple global, constant variables at the top of our program, directly under where we create our `Scanner in` variable. You should have your own user/pin combination.

   ```
   private static final String USERNAME = "user";
   private static final int PIN = 1234;
   ```

   We will then be able to use these variables throughout our program, specifically when we prompt the user for their credentials (and make sure they match the finals) before giving them access to their account.

2) Next we will prompt the user for a username and pin. We will need to check if the username/pin that are entered match the final variables. Users should be informed that their account has been locked temporarily and the program should end if they do not give the correct credentials. If they enter the correct password, they should proceed to account management.

Account Management:
3) Users should be prompted with a menu that allows them to 1) Check account balance 2) Deposit Checks 3) Withdraw Money 4) Logout. The menu should repeat after each choice until the user chooses to logout.

4) **Check account balance**—Display the user's account balance. (You will need to create another global variable to keep track of this.)

5) **Deposit Checks**—Ask the user how many checks they would like to deposit and then prompt for the amount of each check (each check may be a different amount, so prompt for each check's amount). Add the appropriate amount to the account balance.

6) **Withdraw Money**—Ask the user how much money they would like to withdraw and the subtract that amount from their account. (Do not allow the withdrawl to exceed the account balance.)

For Added Fun:
- Give users 3 chances to enter in the correct credentials.
- Only allow withdrawls in increments of $20. If the user chooses an amount that is not a multiple of 20, they should receive an error message and be prompted for a valid amount to withdraw.

- Continue to prompt the user for a valid amount of money to withdraw if they enter in a non-multiple of 20 or an amount that exceeds their balance.
- Ensure that the user input for a menu option is valid. If they choose an invalid option, tell them.

Super Added Fun:
- Read in the account balance from a file at the beginning of the program.
- At the end of the program, write the account balance back to the file so that the account balance is "saved" between program runs.
- Figure out how to use `DecimalFormat` to format your money to $0.00

Sample Output
```
Login:
Username > user
Pin > 1234


WELCOME, user!


+++++++++++Account: user++++++++++++


1. Check Account Balance
2. Deposit Checks
3. Withdraw Money
4. Logout


What would you like to do? > 1
Account Balance: 0.0


+++++++++++Account: user++++++++++++


1. Check Account Balance
2. Deposit Checks
3. Withdraw Money
4. Logout


What would you like to do? > 2
How many checks would you like to deposit? > 3
Amount of Check #1 > $10
Amount of Check #2 > $23.50
Amount of Check #3 > $1
Subtotal to deposit: 34.5
Old Balance: 0.0
New Balance: 34.5


+++++++++++Account: user++++++++++++


1. Check Account Balance
2. Deposit Checks
3. Withdraw Money
4. Logout


What would you like to do? > 1
Account Balance: 34.5


+++++++++++Account: user++++++++++++


1. Check Account Balance
2. Deposit Checks
3. Withdraw Money
4. Logout


What would you like to do? > 3
How much would you like to withdraw? > 50
```

```
You cannot withdraw more than your balance.
> $20
Amount to withdraw: 20
Old Balance: 34.5
New Balance: 14.5


++++++++++Account: user++++++++++++

1. Check Account Balance
2. Deposit Checks
3. Withdraw Money
4. Logout

What would you like to do? > 4

GOODBYE, user!
```