CS428
Software Development with Design Patterns

Final Exam (July 2015)

Design and implement an ATM machine application that can be installed and implemented on portable devices for a major bank network in the US.

You may use any object oriented programming language but without help from any framework.

Each team should have no more than 3 members. Once a team is formed, you need to have a meeting to talk about design, schedule, work split, implementation details, etc. If you have any questions, please talk to me.

The application will be able to handle two different types of accounts: Current and Saving accounts.

For both types the machine should be able to perform the following tasks: check balance, draw 20$, draw 50$, draw other amount. Additional to this there will be an option for the user to change his pin code.

For Current accounts only, the machine should be able to accept payments from money parser device attached to it, it will count the money and add the received balance into user account.

If any mechanical error or damage happened to the machine while drawing money or deposit money, the transaction should be rolled-back and notify the main branch and the maintenance department about the damage.

The machine should be able to print an optional receipt after every successful or failed transaction.

When the machine runs out of money it should be able to notify the main branch and the cashier to refill it with more money.

The machine provides a service for users to pay their utilities bill. So it will be connected to an API provided by the utilities company to check their bill and transfer any amount directly from their accounts to the utilities company.

The machine will be connected to SMSFacade provided by the bank to send SMS messages to the clients upon any operation they preform.

A full log of all operations should be saved in the machine to be retrieved back daily by the maintenance employee.

Your software have to have a friendly interface for touch screens.