SE339 Final Project Proposal

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Overview

Our final project will be a simple Android ATM application that will connect to a java server backend bank. We will be threading the backend tasks so that multiple uses may use the Bank backend services at one time.

Deliverables

An Android application with a nice UI to complete transactions on. The Android application will emulate the functionality of an ATM, allowing users to deposit checks, print receipts, move funds from checking to savings, and withdraw cash.

Details

The Android application will be built using Android studio and will be the UI of our backend Bank functionality. The mobile application will be able to authenticate a user account with the Bank. Once authenticated the application will be allowed to use the functionality of depositing checks, printing receipts, moving funds from checking to savings, and withdrawing cash. Each action that resolves a transfer of funds will check if there are sufficient funds to transfer otherwise result in a warning to the user and cancel the transaction. The Bank will be a server which the mobile application connects to. The Bank will have a list of users and their passwords. Each registered user will have a bank account. The Bank will be resolve each transaction using the java threading library so that multiple users may use the mobile ATM application concurrently. The result of each transaction will be sent to the mobile application to be displayed in the UI.

Established Risks

Most of our development and design will have to be done remotely over Thanksgiving break, this may cause a strain on our communication, we will mitigate this via the use of email, google hangouts and skype.

Timeline

- November 20th
    - Submit Deliverable 1
        - Proposal
    - Submit Deliverable 2
        - Connector Diagram
        - Module Diagram

    - Submit Deliverable 3
        - Use Case Diagram
        - Class Diagram
        - Detailed class diagrams of at least 3 design patterns implemented in your program

- November 21-28th
    - Android UI - ATM
        - Create login page
        - Create user account view
        - Create withdrawl view
        - Create transfer view
        - Create deposit check view
        - Connect to Bank server
    - Create Java threaded server - Bank
        - Establish connection to mobile app
        - Build functionality for login
        - Display current account totals to user via account view
- November 29th- December 5th
    - ATM
        - Complete login page
        - Complete account view
        - Complete transfer view
        - Complete deposit check view
    - Bank
        - Complete withdrawal functionality
        - Complete transfer functionality
        - Complete deposit functionality
    - Code submitted
    - Text File
        - Two locations where you implement defensive programming
        - Two locations where you might have corrected code smells
        - Locations that are responsible for inter-processes/threads communication
        - Three locations where you implement three design patterns