# One Bank Proposal - Banking System

*Software Requirements Specification*

# Revision History

| Date | Revision | Description | Author |
|---|---|---|---|
| 06/11/21 | 0.9 | Initial Version | Garten, Le, Odumosu |
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# Table of Contents

# 1. Purpose

This document outlines the requirements for a Banking System..

## 1.1. Scope

This document will catalog the user, system, and hardware requirements for the Banking system. It will not, however, document how these requirements will be implemented.

## 1.2. Definitions, Acronyms, Abbreviations

1.2.1 User - Customers of the bank

1.2.2 Account Teller - Bank employee which helps the customers with their transactions

1.2.3 ATM - Automatic Teller Machine which let customers have remote access to their accounts

1.2.4 .csv - Comma Separated Values, common file type for saving data.

## 1.3. References

## 1.4. Overview

Banking system is designed to handle customer transactions between the ATM or Teller with a dedicated server. All users' account information will be stored into a separate CSV file for future use.

# 2. Overall Description

## 2.1. Product Perspective

## 2.2. Product Architecture

2.2.1 Three modules will be made. ATM module, Teller Module, Server Module

## 2.3. Product Functionality/Features

2.3.1 View Banking Statements for Teller

2.3.2 Balance Transfer and View

2.3.3 Deposit

2.3.4 Withdraw

2.3.5 Close/Open Account for Teller

2.3.6 Sign In/Out for Customer/ATM accounts and Teller accounts.

2.3.7 Unique ID accounts, Savings and Checking.

## 2.4. Constraints

2.4.1 Must use Java only.
2.4.2 Must connect over TCP/IP.
2.4.3 No outsource funding.
2.4.4 All development will be conducted with GitHub and Eclipse IDE.

## 2.5. Assumptions and Dependencies

2.5.1 One User at ATM and Teller

# 3. Specific Requirements

## 3.1. Functional Requirements

### 3.1.1. Common Requirements:

3.1.1.1 Each user will have an account with a unique id, and password/pin.

3.1.1.2 All data will be saved to the hard disk for reliability and reloading.

### 3.1.2. ATM Module Requirements:

3.1.2.1 Users should be able to use their unique issued id and 4 digits PIN to log in.
3.1.2.1.1 Prompt users to retry if the PIN was inputted incorrectly.
3.1.2.1.2 Cards will be kept if found stolen.
3.1.2.1.3 Reject cards if not valid.
3.1.2.2 Users should be able to view their balances.
3.1.2.3 Users should be able to deposit.
3.1.2.4 Users should be able to withdraw if the amount is less than balance.
3.1.2.5 Users should be able to transfer between accounts.
3.1.2.6 Users should be able to log out.

### 3.1.3. Teller Module Requirements:

3.1.3.1 Tellers should be able to use their unique issued ID number and password to sign in. ID number will be an alphanumeric string, 10 characters long and the password will be an alphanumeric string between 7 and 20 characters long.

3.1.3.2 Tellers should be able to view any user's account.

3.1.3.3 Tellers should be able to view a user's banking statement.

3.1.3.4 Tellers should be able to open an account for a user as well as close a user's account with User's permission.

3.1.3.5 Tellers should be able to withdraw money from the account if the amount is less than the balance.

3.1.3.6 Tellers should be able to deposit money into an account only with the User's permission.

3.1.3.7 Tellers should be able to sign out.

### 3.1.4. Server Module Requirements:

3.1.4.1 Can accept messages from both ATM and Teller Clients over TCP/IP.

3.1.4.2 Validates login/pin information.

3.1.4.3 All transactions will be logged for Bank Statements

3.1.4.4 All balances and accounts status will be saved to the hard disk.

3.1.4.5 Ensures complete transaction before committing to saved data on hard disk. Interruption will abandon any proposed changes

3.1.4.6 Startup and shutdown protocols.

### 3.2. External Interface Requirements

N/A

### 3.3. Internal Interface Requirements

3.3.1 Users will have their accounts stored into a csv file.
3.3.2 Users' bank statements will be kept for 3 years.

# 4. Non-Functional Requirements

### 4.1. Security and Privacy Requirements

4.1.1 Encrypt users data

### 4.2. Environmental Requirements

4.2.1 System has to work on MacOS and WindowsOS.

### 4.3. Performance Requirements

N/A