

Banking

Software Requirements Specifications

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1. Purpose

This document outlines the requirements for the 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

ATM - automated teller machine

PIN - personal identification number

1.3. References

Use Case Specification Document

UML Use Case Diagrams Document

Class Diagrams

Sequence Diagrams

1.4. Overview

This banking system is designed to give an interface for both customers and employees, which would provide customers ATM services while having access to assistance from employees.

2. Overall Description

2.1. Product Perspective

2.2. Product Architecture

The system will be organized into 3 major modules: Teller module, Account module and Bank module

Note: System architecture should follow standard OO design practices.

2.3. Product Functionality/Features

The high-level features of the system are as follows (see section 3 of this document for more detailed requirements that address these features):

2.4. Constraints

Users will only be allowed 2 accounts (1 for checking and 1 for saving).

2.5. Assumptions and Dependencies

It is assumed that there are multiple tellers and customers

It is assumed that the file for the transaction history can be accessed at any time

3. Specific Requirements

3.1 Functional Requirements

3.1.1 Common Requirements:

3.1.1.1 Have a login system for the bank teller and the customer using alphanumeric strings between 8-25 characters in length

3.1.1.2 System should display available actions for both customers and employees. System should also display accurate bank account information.

3.1.2 Teller Module Requirements:

3.1.2.1 Teller should have access to all bank account information.

3.1.2.2 Teller should be able to transfer/deposit money between any accounts.

3.1.2.3 Teller should be able to manage accounts within the system, for example adding/deleting accounts from the banking system.

3.1.3 Bank Module Requirements:

3.1.3.1 Banks should provide basic ATM services, such as depositing, withdrawing, and transferring between accounts.

3.1.3.2 Bank should provide access to user's accounts information.

3.1.3.3 Bank should provide option to convert current currency to desired currency

3.1.4 Account Module Requirements:

3.1.4.1 Account should store current balance and transfer/transaction history.

3.1.4.2 Should store the bank tellers' login information as well as the customers' information

3.2 External Interface Requirements

3.2.1 System should provide an interface to login for customers and employees. Actions displayed depend on the user's role.

3.2.2 System should display account number, account balance, and account history.

3.3 Internal Interface Requirements

3.3.1 Account history must show time of action, action taken, and amount withdrawn/deposited.

3.3.2 In a text file the system will store the username and password of the bank teller and the customers

3.3.3 The system will have the currency information of 10 different countries to allow conversion.

3.3.4 The system will work with multiple banks.

3.3.5 Withdrawal and deposit of money has a per day limit.

4. Non-Functional Requirements

4.1 Security and Privacy Requirements

4.1.1 The system must have an emergency shut off on system errors.

4.1.2 The system must have a secure login system for the user.

4.1.3 User passwords/PIN are stored after hashing.

4.1.4 System will limit login sessions to 5 minutes.

4.2 Environmental Requirements

4.2.1 System will store user information in plaintext.

4.3 Performance Requirements

4.3.1 System actions will apply within 30 seconds of activation.

4.3.2 Bank account information should update within seconds of action taken.

4.3.3 Account actions should be logged at time of action for account history.