Group 3

Software Requirements Specification

Revision History

**Date**

**Revision**

**Description**

**Author**

09/27/2025

1.0

Completed 1.1, 1.4, 2.1, and 2.3

Transferred Requirements to 3.1.1

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09/27/2025

1.1

Added 5 Constraints

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• Purpose

This document outlines the requirements for the Banking System.

• 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.

• Definitions, Acronyms, Abbreviations

List any acronyms, terms etc. that need to be defined.

• References

Use Case Specification Document – Step 2 in assignment description

UML Use Case Diagrams Document – Step 3 in assignment description

Class Diagrams – Step 5 in assignment description

Sequence Diagrams – Step 6 in assignment description

• Overview

The Banking System is designed to provide banking services through an interface for authorized bank employees and a separate ATM application. Security and fraud prevention are ever-present concerns.

• Overall Description

• Product Perspective

The Banking System is an application that provides access to standard banking services for customers through both bank employees and ATM machines. The Banking System protects customers’ accounts from unauthorized access and minimizes fraud. The system is a java application that uses a client–server design over TCP/IP, and manages requests such as withdrawals, deposits, balance inquiries, and transfers. The system accommodates two types of users with different privileges and levels of access, authorized bank employees and ATM customers. The system also keeps a persistent log of user activity for record and fraud detection

• Product Architecture

The system will be organized into 4 major modules:

The Authentication module

The Teller module

The ATM module

The Logging module

• 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)

• Authentication interface for bank tellers and ATM customers

• Standard banking services, including deposit and withdrawal of money, balance inquiries, and electronic transfers.

• Logging of account activity and transaction history

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• Constraints

List appropriate constraints.

Constraint example: SR7 Since users may use any web browser to access the system, no browser-specific code is to be used in the system.

1. Must provide a graphical interface

2. Must be implemented in java

3, Must have a server and client application that operates using TCP/IP

4. The system must not have a web or HTML component

5. The system must not rely on any databases, libraries, or frameworks

• Assumptions and Dependencies

List appropriate assumptions

Assumption Example: It is assumed that the maximum number of users at a given time is 15,000.

• Specific Requirements

• Functional Requirements

• Common Requirements:

3.1.1.1 SR9 The system has an interface for bank employees and a separate one for ATM services

3.1.1.2 SR23 The system stores account passwords, usernames, balances, and transaction history

3.1.1.3 The system allows new accounts to be created, and allows new people to be added to existing accounts

3.1.1.4 The system allows money to be deposited, withdrawn, or transferred between accounts

3.1.1.5 The system ensures there are no accounts with the same username

3.1.1.6 The system must ensure that at any moment, an account can only be logged into by one program at a time.

3.1.1.7 The system allows the creation of 3 types of accounts: checking, savings, and a line of credit

3.1.1.8 The system must generate a receipt/confirmation message after every transaction showing the transaction details (type, amount, date, and updated balance)

3.1.1.9 The system charges fees and provides interest appropriately

3.1.1.10 The system will give Bank employees access to change passwords, close accounts, or adjust credit limits.

• \_\_\_\_\_ Module Requirements:

Provide module specific requirements as appropriate. SR10

Example:

3.1.2.1 SR9 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.

• \_\_\_\_\_ Module Requirements:

Provide module specific requirements as appropriate. SR10

Example:

3.1.2.1 SR9 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.

• \_\_\_\_\_ Module Requirements:

Provide module specific requirements as appropriate. SR10

Example:

3.1.2.1 SR9 Users should be allowed to log in using their issued id and pin, both of which are alphanumeric strings between 6 and 20 characters in length.

• External Interface Requirements

Provide module specific requirements as appropriate. SR10

Example:

3.2.1 SR9 SR1 The system must provide an interface to the University billing system administered by the Bursar’s office so that students can be automatically billed for the courses in which they have enrolled. The interface is to be in a comma-separated text file containing the following fields: student id, course id, term id, action. Where “action” is whether the student has added or dropped the course. The file will be exported nightly and will contain new transactions only.

• Internal Interface Requirements

Provide module specific requirements as appropriate. SR10

Example:

3.3.1 SR17 The system must process a data-feed from the grading system such that student grades are stored along with the historical student course enrolments. Data feed will be in the form of a comma-separated interface file that is exported from the grading system nightly.

3.3.2 SR24 The system must process a data-feed from the University billing system that contains new student records. The feed will be in the form of a comma-separated text file and will be exported from the billing system nightly with new student records. The fields included in the file are student name, student id, and student pin number.

• Non-Functional Requirements

• Security and Privacy Requirements

Example:

4.1.1 The SR8 System must encrypt data being transmitted over the Internet.

• Environmental Requirements

Example:

4.2.1 SR20 System cannot require that any software other than a web browser be installed on user computers.

4.2.2 SR25 System must make use of the University’s existing Oracle 9i implementation for its database.

4.2.3 SR26 System must be deployed on existing Linux-based server infrastructure.

• Performance Requirements

Example:

4.3.1 SR27 System must render all UI pages in no more than 9 seconds for dynamic pages. Static pages (HTML-only) must be rendered in less than 3 seconds.