

# Problem Definition Document (PDD)

## Introduction

**The Bank Management System** is a console-based application designed to manage bank accounts and facilitate essential banking operations efficiently. This system provides features such as creating new accounts, updating existing ones, performing transactions (deposits and withdrawals), and generating account reports. By focusing on core banking functionalities, it aims to simplify account management for banks and their customers.

## Problem Statement

Managing bank accounts involves challenges such as:

- ✚ Lack of automation for account creation and transaction management.
- ✚ Difficulty tracking account balances and maintaining transaction records.
- ✚ Limited tools for securely managing customer data.

These challenges make it necessary to develop a simple yet effective console-based solution that can streamline banking processes.

## Project Objectives

- ✚ To develop a console-based system that enables the creation, updating, and deletion of bank accounts.
- ✚ To provide features for performing deposits, withdrawals, and account balance inquiries.
- ✚ To maintain transaction records for auditing and future references.

## **Preliminary Solution**

To address the problems outlined, we propose the following solutions:

### **Solution 1: Console-Based Application**

Developing the project as a console application using C++. Features include:

- ✚ Account creation and modification.
- ✚ Deposit and withdrawal functionalities.
- ✚ Balance checking and account reporting.

### **Solution 2: Transaction Record Management**

Implementing a file-based system for storing transaction data. Key functionalities include:

- ✚ Recording deposits and withdrawals in a text file.
- ✚ Ensuring data integrity and easy retrieval.

### **Solution 3: Account Data Persistence**

Using file handling to save and load account data, ensuring no loss of information between sessions.

## Project Scopes:

The features and functionalities of the proposed Bank Management System are outlined in **Table 01**.

**Table 01:** Project scopes

Solution No	Functions	Features	Facilities
01	Account management.	Creation, updating, and deletion of accounts.	Simplifies account management and improves user experience.
02	Transaction management.	Deposit and withdrawal functionalities.	Tracks financial activities and maintains accurate balances.
03	Persistent data storage.	Saving account and transaction details in text files.	Ensures data is stored securely and accessible for future use, even if the application is restarted.

## Conclusion

The Bank Management System is designed to address fundamental banking needs efficiently. By integrating account management, transaction handling, and data storage, the system offers a reliable and user-friendly solution. It simplifies banking operations, ensuring convenience and accessibility for banks and customers alike.