Bank Management System in C

University Name: NED
Roll Number: CT-25091
Subject: Fundamental Programming
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Department: CSIT
Course Name: Programming

Project Title: Bank Management System in C

Project Description

This project is a simple console-based Bank Management System developed by me as a beginner student in C programming. The system allows basic bank account operations such as creating accounts, storing customer information, and performing simple transactions.
The main goal of this project is to practice and apply fundamental C programming concepts such as arrays, structures, pointers, file handling, and modular programming.

Objectives

1. Practice C programming by creating a small real-world application.
2. Implement basic bank operations like deposit, withdrawal, and balance inquiry.
3. Learn how to store and retrieve data using files in C.
4. Improve understanding of functions, pointers, and structures.

Scope of the Project

Included in the Project

- Creating and registering bank accounts.
- Viewing customer records.
- Editing account information.
- Deleting existing accounts.
- Searching for accounts using account numbers.
- Deposits, withdrawals, and balance checking.
- Saving and loading data using **record.bin**.

Not Included in the Project

- Online or internet-based banking.
- Advanced security or encrypted login.
- Graphical User Interface (GUI).
- Multi-user access.
- International banking processes.

Tools & Technologies Used

- **Language:** C
- **Compiler:** GCC (MSYS2 UCRT64)
- **Editor:** Visual Studio Code
- **Platform:** Windows 10
  These tools were selected because they are simple and commonly used for learning C programming.

Expected Learning Outcomes

By completing this project, I was able to:

- Understand how to use files in C for saving and loading data.
- Apply modular programming by dividing the program into functions.
- Use structures to organize account information.
- Practice using pointers to update data in memory.
- Build a complete working system using basic C concepts.

Methodology

Since I am a beginner, I used a simple and clear step-by-step approach:

1. Planning the basic modules of the program.
2. Creating the login system and simple authentication.
3. Implementing account creation, editing, deletion, and searching.
4. Adding transaction features (deposit, withdraw, balance inquiry).
5. Using file handling to make data permanent.
6. Testing each part and fixing errors.

Timeline (Completed in 2 Weeks)

Week 1

- Understanding requirements and planning the program.
- Designing data structures (structs) and basic menu system.
- Starting coding: login and account management.

Week 2

- Completing transaction functions.
- Adding file handling (record.bin).
- Testing all features and preparing the project report.

Significance of the Project

This project is important for me as a beginner because it helped me understand how programming is used in real-life applications like banking systems.
It also improved my logical thinking, problem-solving, and understanding of how data flows inside a program.