Project Proposal

1. **Report Project Title:** Digital Wallet System Using C Language.
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3. **Course Name/Code:** Software Development I (C Programming) – CSE 1290.
4. **Name/Number Date:** 01/03/2025.
5. **Introduction:**
   5.1. Background Information: Digital wallets have revolutionized the way financial transactions are conducted. This project aims to develop an initial prototype of a digital wallet system, similar to bKash, using C programming.
   5.2. Purpose of the Project: The objective of this project is to create a basic digital wallet system that allows users to register, add funds, transfer money, and check balances using C programming. The system will serve as an initial scratch model for future enhancements.
6. **Project Overview:**
   6.1. Problem Statement: Traditional banking systems require physical presence or extensive online systems for transactions. A digital wallet provides a fast and easy way for users to manage their funds without requiring a complex infrastructure.
   6.2. Objectives:
      6.2.1. Develop a command-line-based digital wallet system.
      6.2.2. Implement user registration and authentication.
      6.2.3. Enable money transfers between users.
      6.2.4. Provide balance inquiry functionality.
      6.2.5. Ensure basic security measures like PIN authentication.
7. **System Architecture:**
   7.1. High-Level Architecture:
      7.1.1. The system will use a C-based program that handles user accounts and transactions.
      7.1.2. File handling will be used for data storage.
      7.1.3. User authentication will be implemented through PIN verification.
      7.1.4. Transactions will be managed through simple function-based operations.
   7.2. Components**:**
      7.2.1. User Interface**:** A command-line interface for users.
      7.2.2. Account Management Module: Handles user registration, PIN authentication, and account details.
      7.2.3. Transaction Module: Allows users to add money, send money, and check balance.
      7.2.4. Data Storage: Uses file handling in C to store user account details securely.
8. **Project Plan:**
   8.1. Timeline (1 Month):
      8.1.1. Week 1 - Research and finalize project requirements.

8.1.2. Week 2 - Design system architecture and implement user registration and authentication.

8.1.3. Week 3 - Implement transaction functionalities (add money, send money, check balance).

8.1.4. Week 4 - Testing, debugging, and final improvements.

8.2. Milestones:

8.2.1. Completion of research and requirements.

8.2.2. Development of account registration and login features.

8.2.3. Implementation of transaction operations.

8.2.4. Testing and finalization of the system.

9. **Conclusion:**

9.1. Summary: This project proposes a simple yet effective digital wallet system written in C. The system will allow users to register, add funds, transfer money, and check balances in a secure manner.

9.2. Future Work:

9.2.1. Expand the system to include a GUI.

9.2.2. Implement an encrypted database instead of file storage.

9.2.3. Introduce advanced security features like OTP verification.

10. **References:**

None