**Functional and Non-Functional Requirements**

**ATM System**

**1. Introduction**

**1.1 Purpose**

The purpose of this document is to define the requirements for a simple Automated Teller Machine (ATM) system, which will allow users to simulate basic banking transactions. This project is based upon implementing menu-driven functionality in either C/C++.

**2. Specific Requirements**

**2.1 Functional Requirements**

The user must enter a valid PIN in order to proceed further.

1. **Menu Display**:
   * The system shall display a menu with the following options:

1. Check Balance

2. Deposit Money

3. Withdraw Money

4. Exit

* + The menu shall reappear after completing a transaction unless the user selects the "Exit" option.

1. **Balance Inquiry**:
   * The system shall display the user’s current balance.
2. **Cash Deposit**:
   * The system shall prompt the user to enter the amount to deposit.
   * The entered amount shall be added to the balance.
3. **Cash Withdrawal**:
   * The system shall prompt the user to enter the amount to withdraw.
   * If the entered amount exceeds the balance, the system shall display an error message.
   * If the balance is sufficient, the entered amount shall be deducted from the balance.
4. **Exit**:
   * The system shall terminate the program when the user selects the "Exit" option.

**2.2 Non-Functional Requirements**

1. **Performance**:
   * The system shall process user inputs and transactions within 1 second.
2. **Usability**:
   * The system shall display clear instructions and error messages for invalid inputs i.e. only numeric values shall be considered as valid input.
3. **Reliability**:
   * The system shall handle invalid inputs by re-prompting the user without crashing.
4. **Portability**:
   * The program shall run on any C or C++ compiler, including GCC and Turbo C++.
   * Visual studio code shall be used to implement this project and GitHub to upload the same.