ATM Simulation System

This Python-based ATM simulation system allows users to perform various banking activities through a simulated ATM interface. The program provides options for users to create an account, log in, check their balance, deposit money, withdraw funds, and change their PIN securely. Input validation for details such as mobile number, email, Aadhaar number, and PIN ensures a secure experience.

Features

1. **Account Creation**:
   - New users can create an account by providing personal details such as name, address, age, gender, mobile number, email, Aadhaar number, and PIN.
2. **Login System**:
   - Existing users can securely log in using their PIN.
3. **Banking Operations**:
   - **Check Balance**: View the account balance.
   - **Deposit Funds**: Add funds to the account after PIN verification.
   - **Withdraw Funds**: Withdraw funds with PIN verification and sufficient balance.
   - **Change PIN**: Securely update the account's PIN.
4. **Input Validation**:
   - Ensures valid inputs for details like mobile number, email, Aadhaar number, and PIN, maintaining security and usability.
5. **Security**:
   - Limits incorrect PIN attempts to 5 for added security.
6. **User-Friendly Interface**:
   - Text-based, prompt-driven interface for easy navigation.

Usage

When you run the `atm.py` script, follow these steps to interact with the ATM system:

1. **Start the program**:
   - Choose `1` to log in or `2` to create a new account.
2. **Account Operations**:
   - After logging in or creating an account, you'll see a menu to check balance, deposit funds, withdraw funds, change your PIN, or exit.

ATM Menu Options:

- **1**: Check Balance
- **2**: Deposit Funds
- **3**: Withdraw Funds
- **4**: Change PIN

- **5**: Exit

Code Structure

The program is structured into a class-based system for clear and organized code. Below is an overview of the primary methods:

1. `user()`: Handles account creation or login.
2. `manue()`: Main menu that directs users to specific banking operations.
3. **User Details and Verification Methods**:
   - `user_detailse()`: Collects name and address.
   - `age_limt()`, `gander()`, `mobile_number()`, `check_email()`, `aadhaar_number()`: Validates specific personal details.
   - `get_16_digit_ATM_Number()`, `get_4_digit_PinNo()`: Manages ATM card number and PIN creation.
4. **Transaction Methods**:
   1. `deposit()`: Adds funds after PIN validation.
   2. `withdral()`: Withdraws funds if the balance is sufficient.
   3. `check()`: Displays balance after PIN validation.
   4. `change()`: Changes the PIN securely.

Following the prompts, you can create an account, log in, and access various banking functions through the interactive text interface.

Contributing

Contributions are welcome! If you would like to improve the code, add new features, or report issues, feel free to fork the repository and create a pull request.