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# Bank system simulation
class BankAccount:
    def __init__(self, account_number, pin, balance=0):
        self.account_number = account_number
        self.pin = pin
        self.balance = balance

    def deposit(self, amount):
        if amount > 0:
            self.balance += amount
            print(f"Deposited ${amount}. Current balance: $
{self.balance}")
        else:
            print("Invalid deposit amount.")

    def withdraw(self, amount):
        if amount > 0 and amount <= self.balance:
            self.balance -= amount
            print(f"Withdrew ${amount}. Current balance: $
{self.balance}")
        elif amount > self.balance:
            print("Insufficient funds!")
        else:
            print("Invalid withdrawal amount.")

    def check_balance(self):
        print(f"Current balance: ${self.balance}")

# Bank system functions
class BankingSystem:
    def __init__(self):
        # For simplicity, creating one sample account
        self.accounts = {
            "12345": BankAccount("12345", "1234", 1000) # Sample
account: account_number, pin, balance
        }
        self.logged_in_account = None

    def login(self, account_number, pin):
        if account_number in self.accounts and
self.accounts[account_number].pin == pin:
            self.logged_in_account = self.accounts[account_number]
            print(f"Login successful. Welcome, Account
#{account_number}!")
        else:
            print("Invalid account number or pin.")

    def logout(self):
        if self.logged_in_account:
            print(f"Logged out from Account

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#{self.logged_in_account.account_number}.")
    self.logged_in_account = None
else:
    print("No account is logged in.")

def run(self):
    while True:
        print("\n--- Banking System ---")
        if not self.logged_in_account:
            print("1. Login")
        else:
            print("1. Deposit Money")
            print("2. Withdraw Money")
            print("3. Check Balance")
            print("4. Logout")

        print("5. Exit")

        choice = input("Choose an option: ")

        if choice == "1":
            if self.logged_in_account:
                amount = float(input("Enter deposit amount: $"))
                self.logged_in_account.deposit(amount)
            else:
                account_number = input("Enter account number: ")
                pin = input("Enter pin: ")
                self.login(account_number, pin)

        elif choice == "2":
            if self.logged_in_account:
                amount = float(input("Enter withdrawal amount:
$"))
                self.logged_in_account.withdraw(amount)
            else:
                print("Please log in first.")

        elif choice == "3":
            if self.logged_in_account:
                self.logged_in_account.check_balance()
            else:
                print("Please log in first.")

        elif choice == "4":
            if self.logged_in_account:
                self.logout()
            else:
                print("No account logged in.")

        elif choice == "5":

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                print("Thank you for using the banking system.  
Goodbye!")  
                break  
            else:  
                print("Invalid option. Please try again.")  
  
# Run the banking system  
bank_system = BankingSystem()  
bank_system.run()
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--- Banking System ---
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- 1. Login
- 5. Exit

```
Choose an option: 1  
Enter account number: 12345  
Enter pin: 1234
```

```
Login successful. Welcome, Account #12345!
```

```
--- Banking System ---
```

- 1. Deposit Money
- 2. Withdraw Money
- 3. Check Balance
- 4. Logout
- 5. Exit

```
Choose an option: 3
```

```
Current balance: $1000
```

```
--- Banking System ---
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- 1. Deposit Money
- 2. Withdraw Money
- 3. Check Balance
- 4. Logout
- 5. Exit

```
Choose an option: 1  
Enter deposit amount: $ 500
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Deposited $500.0. Current balance: $1500.0
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```
--- Banking System ---
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- 1. Deposit Money
- 2. Withdraw Money
- 3. Check Balance
- 4. Logout
- 5. Exit

Choose an option: 4

Logged out from Account #12345.

--- Banking System ---

1. Login

5. Exit

Choose an option: 5

Thank you for using the banking system. Goodbye!