Write a python program to replicate a Banking system. The following features are mandatory:

1. Account login
2. Amount Depositing
3. Amount Withdrawal

Other than the above features you can add any other also.

5.Check Balance

6.Transaction History

In [4]:
```
class Bank:
    def __init__(self):
        self.accounts = {}  # Store accounts with username as key

    def create_account(self, username, password, initial_balance=0):
        if username in self.accounts:
            print("Account already exists!")
        else:
            self.accounts[username] = {
                "password": password,
                "balance": initial_balance,
                "transactions": []
            }
            print(f"Account created successfully for {username}!")

    def login(self, username, password):
        if username in self.accounts and self.accounts[username]["password"] ==
            print("Login successful!")
            return username
        else:
            print("Invalid username or password.")
            return None

    def deposit(self, username, amount):
        if amount > 0:
            self.accounts[username]["balance"] += amount
            self.accounts[username]["transactions"].append(f"Deposited: {amount}
            print(f"Deposited {amount}. New Balance: {self.accounts[username]['b
        else:
            print("Invalid deposit amount!")

    def withdraw(self, username, amount):
        if amount > 0 and self.accounts[username]["balance"] >= amount:
            self.accounts[username]["balance"] -= amount
            self.accounts[username]["transactions"].append(f"Withdrew: {amount}"
            print(f"Withdrew {amount}. New Balance: {self.accounts[username]['ba
        else:
            print("Insufficient balance or invalid amount!")

    def check_balance(self, username):
        print(f"Current Balance: {self.accounts[username]['balance']}")

    def transaction_history(self, username):
```

```
        print("Transaction History:")
        for transaction in self.accounts[username]["transactions"]:
            print(transaction)


# Main Program
bank = Bank()

while True:
    print("\n--- Welcome to the Banking System ---")
    print("1. Create Account")
    print("2. Login")
    print("3. Exit")
    choice = input("Enter your choice: ")

    if choice == "1":
        username = input("Enter a username: ")
        password = input("Enter a password: ")
        initial_balance = float(input("Enter initial balance (optional, default
        bank.create_account(username, password, initial_balance)

    elif choice == "2":
        username = input("Enter your username: ")
        password = input("Enter your password: ")
        logged_in_user = bank.login(username, password)

        if logged_in_user:
            while True:
                print("\n--- Banking Menu ---")
                print("1. Deposit")
                print("2. Withdraw")
                print("3. Check Balance")
                print("4. Transaction History")
                print("5. Logout")
                sub_choice = input("Enter your choice: ")

                if sub_choice == "1":
                    amount = float(input("Enter amount to deposit: "))
                    bank.deposit(logged_in_user, amount)

                elif sub_choice == "2":
                    amount = float(input("Enter amount to withdraw: "))
                    bank.withdraw(logged_in_user, amount)

                elif sub_choice == "3":
                    bank.check_balance(logged_in_user)

                elif sub_choice == "4":
                    bank.transaction_history(logged_in_user)

                elif sub_choice == "5":
                    print("Logged out successfully.")
                    break

                else:
                    print("Invalid choice! Try again.")

    elif choice == "3":
        print("Thank you for using the Banking System. Goodbye!")
        break
```

```
    else:
        print("Invalid choice! Try again.")
```

```
--- Welcome to the Banking System ---
1. Create Account
2. Login
3. Exit
Account created successfully for madhulal!

--- Welcome to the Banking System ---
1. Create Account
2. Login
3. Exit
Login successful!

--- Banking Menu ---
1. Deposit
2. Withdraw
3. Check Balance
4. Transaction History
5. Logout
Current Balance: 500000.0

--- Banking Menu ---
1. Deposit
2. Withdraw
3. Check Balance
4. Transaction History
5. Logout
Transaction History:

--- Banking Menu ---
1. Deposit
2. Withdraw
3. Check Balance
4. Transaction History
5. Logout
Deposited 10000.0. New Balance: 510000.0

--- Banking Menu ---
1. Deposit
2. Withdraw
3. Check Balance
4. Transaction History
5. Logout
Withdrew 38500.0. New Balance: 471500.0

--- Banking Menu ---
1. Deposit
2. Withdraw
3. Check Balance
4. Transaction History
5. Logout
```

```
Transaction History:
Deposited: 10000.0
Withdrew: 38500.0

--- Banking Menu ---
1. Deposit
2. Withdraw
3. Check Balance
4. Transaction History
5. Logout
Transaction History:
Deposited: 10000.0
Withdrew: 38500.0

--- Banking Menu ---
1. Deposit
2. Withdraw
3. Check Balance
4. Transaction History
5. Logout
Current Balance: 471500.0

--- Banking Menu ---
1. Deposit
2. Withdraw
3. Check Balance
4. Transaction History
5. Logout
Logged out successfully.

--- Welcome to the Banking System ---
1. Create Account
2. Login
3. Exit
Thank you for using the Banking System. Goodbye!
```

In [ ]: