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credentials = {}
users_db = {}
passbook = {}
nested_t = {}
import datetime
import random

print("~" * 23, "WELCOME to HDFC BANK", "~" * 25)
print("\nHow can we help you today?")

while True:
    print("""\n1. Open an Account
2. View Account Details
3. Perform Transactions (Withdraw/Deposit/Transfer)
4. View Transaction History
5. Exit""")

    choice = int(input("\nEnter your choice between 1 to 5: "))

    if choice == 1: # Open an Account
        fname = input("\nEnter First Name: ")
        lname = input("Enter Last Name: ")
        age = input("Enter Age: ")
        city = input("Enter City Name: ")
        pancard = input("Enter Pan Card Number: ")

        if pancard in users_db.keys():
            print("Your Account already exists! Try Again")
            continue

        account_number = "11112222"
        for i in range(4): # Generate unique account number
            account_number += str(random.randint(0, 9))

        account_type = input("Which type of account would you like to
open? (Current/Savings): ")
        balance = int(input("How much amount do you wish to deposit?
"))

        username = fname
        for i in range(2): # Generate username
            username += str(random.randint(0, 9))

        password = ""
        for i in range(4): # Generate password
            password += str(random.randint(0, 9))

        print("\nYour Assigned username is", username)
        print("Your Assigned password is", password)
        print("Account Number:", account_number)

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    print("Account Type:", account_type)
    print("Your Initial balance is ₹", balance)
    print()

    credentials[username] = password
    users_db[pancard] = [fname, lname, account_number,
account_type, balance]

    elif choice == 2: # View Account Details
        un = input("Enter username: ")
        ps = input("Enter password: ")
        pc = input("Enter pancard: ")
        if un in credentials.keys() and ps == credentials[un] and pc
in users_db.keys():
            print("Your Account Details are: ")
            print("Account Number:", users_db[pc][2])
            print("Account Holder's Name: ", users_db[pc][0],
users_db[pc][1])
            print("Account Type:", users_db[pc][3])
            print("Total Balance is: ₹", users_db[pc][4])
        else:
            print("This account does not exist, try again!")

    elif choice == 3: # Perform Transactions
        un = input("Enter username: ")
        ps = input("Enter password: ")
        pc = input("Enter pancard: ")
        if un in credentials.keys() and ps == credentials[un] and pc
in users_db.keys():
            print("""
1. Deposit
2. Withdraw
3. Transfer""")
            t_type = input("Enter transaction type: ").capitalize()

            if t_type == "Deposit": # Deposit
                t_amount = float(input("Enter amount you wish to
deposit: "))
                users_db[pc][4] += t_amount
                timestamp = datetime.datetime.now()
                print("Your current balance is: ₹", users_db[pc][4])

            elif t_type == "Withdraw": # Withdraw
                t_amount = float(input("Enter amount you wish to
withdraw: "))
                if t_amount > users_db[pc][4]:
                    print("You cannot withdraw more than the deposited
amount")
                else:
                    users_db[pc][4] -= t_amount

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        timestamp = datetime.datetime.now()
        print("Remaining balance is: ₹", users_db[pc][4])

    elif t_type == "Transfer": # Transfer
        r_pancard = input("Enter receiver's pancard: ")
        t_amount = float(input("Enter amount you want to
transfer: "))
        if r_pancard in users_db.keys() and t_amount <=
users_db[pc][4]:
            users_db[pc][4] -= t_amount
            users_db[r_pancard][4] += t_amount
            timestamp = datetime.datetime.now()
            print("Transfer successful! Remaining balance is:
₹", users_db[pc][4])
        else:
            print("Transfer failed! Insufficient balance or
invalid receiver details.")

    else:
        print("Invalid transaction type!")

    nested_t[timestamp] = [t_type, t_amount, users_db[pc][4]]
    passbook[pc] = nested_t
else:
    print("This account does not exist, try again!")

elif choice == 4: # View Transaction History
    un = input("Enter username: ")
    ps = input("Enter password: ")
    pc = input("Enter pancard: ")
    if un in credentials.keys() and ps == credentials[un] and pc
in users_db.keys():
        print("
Timestamp                | Type    | Amount    |
Balance")
        if pc in passbook:
            for timestamp, details in passbook[pc].items():
                print(f"{timestamp} | {details[0]} | ₹{details[1]}
| ₹{details[2]}")
            else:
                print("No transactions found!")
        else:
            print("This account does not exist, try again!")

elif choice == 5: # Exit
    print("Thank you for banking with us! Have a great day!")
    break

else:
    print("Invalid choice! Please try again.")

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~~~~~ WELCOME to HDFC BANK ~~~~~

How can we help you today?

1. Open an Account
2. View Account Details
3. Perform Transactions (Withdraw/Deposit/Transfer)
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5. Exit

Enter your choice between 1 to 5: 1

Enter First Name: Jay

Enter Last Name: Jadhav

Enter Age: 21

Enter City Name: Kalyan

Enter Pan Card Number: 2345678

Which type of account would you like to open? (Current/Savings):

Savings

How much amount do you wish to deposit? 20000

Your Assigned username is Jay03

Your Assigned password is 1292

Account Number: 111122228715

Account Type: Savings

Your Initial balance is ₹ 20000

1. Open an Account
2. View Account Details
3. Perform Transactions (Withdraw/Deposit/Transfer)
4. View Transaction History
5. Exit

Enter your choice between 1 to 5: 2

Enter username: Jay

Enter password: 1292

Enter pancard: 2345678

This account does not exist, try again!

1. Open an Account
2. View Account Details
3. Perform Transactions (Withdraw/Deposit/Transfer)
4. View Transaction History
5. Exit

Enter your choice between 1 to 5: 2

Enter username: Jay03

Enter password: 1292

Enter pancard: 2345678

Your Account Details are:

Account Number: 111122228715

Account Holder's Name: Jay Jadhav

Account Type: Savings

Total Balance is: ₹ 20000

1. Open an Account
2. View Account Details
3. Perform Transactions (Withdraw/Deposit/Transfer)
4. View Transaction History
5. Exit

Enter your choice between 1 to 5: 4

Enter username: Jay03

Enter password: 1292

Enter pancard: 2345678

| Timestamp              | Type | Amount | Balance |
|------------------------|------|--------|---------|
| No transactions found! |      |        |         |

1. Open an Account
2. View Account Details
3. Perform Transactions (Withdraw/Deposit/Transfer)
4. View Transaction History
5. Exit

Enter your choice between 1 to 5: 5

Thank you for banking with us! Have a great day!