**Design decisions :**

Users enters ATM and is welcomed

Users enters his account details

Yes

Invaild credentials ?

No

Yes

User enters the correct OTP

Users enters the wrong OTP more than 5 times

User enters a wrong OTP

User enters the OTP

User is sent an OTP to his mobile number.

No

User enters the main menu

Option 1 : Withdraw cash

Person enters the amount and amount is dispensed.

If the amount is valid and cash dispenser has the available denomonations,cash is dispensed from the cash dispenser.

Option 2 : Deposit cash

Person enters the amount and drops the envelope in the deposit box.

Option 3 : View Balance

Person is able to view his balance

Option 4 : View receipt

Person is able to view his receipt.

Option 5 : View transaction history

Person is able to view his transaction history

Option 6 : Edit profile

Person is able to edit his pin and mobile number

Option 7 : Logout

Person logs out from his account

Functionalities :

1. Menu based system.
2. Only integer inputs are allowed which mimics the actual ATM kepad.
3. Polymorphism could be seen in classes Keypad and Display.
4. Abstraction could be seen through interfaces DisplayMethods and ScreenMenu.
5. Encapsulation is done is all classes (except interfaces)
6. Bank database is set up to track the data.
7. Session history keeps track of the withdrawal and deposit events.

Advantages :

1. Menu driven
2. Implemented in such a way that involves significant use of object oriented concepts.
3. Databases in .txt format are convenient to use (works for a basic design).

Disadvantage –

Admin operations are not implemented

Update bank database – user name ->account number ->pin ->phone no-> balance ->total balance