Simple ATM Interface
SDLC Report

Gurkirat Singh

October 31, 2025

1 Project Overview

- **Project Title:** Simple ATM Interface
- **Objective:** To create a console-based ATM system that allows multiple users to login, check balance, deposit, and withdraw money.

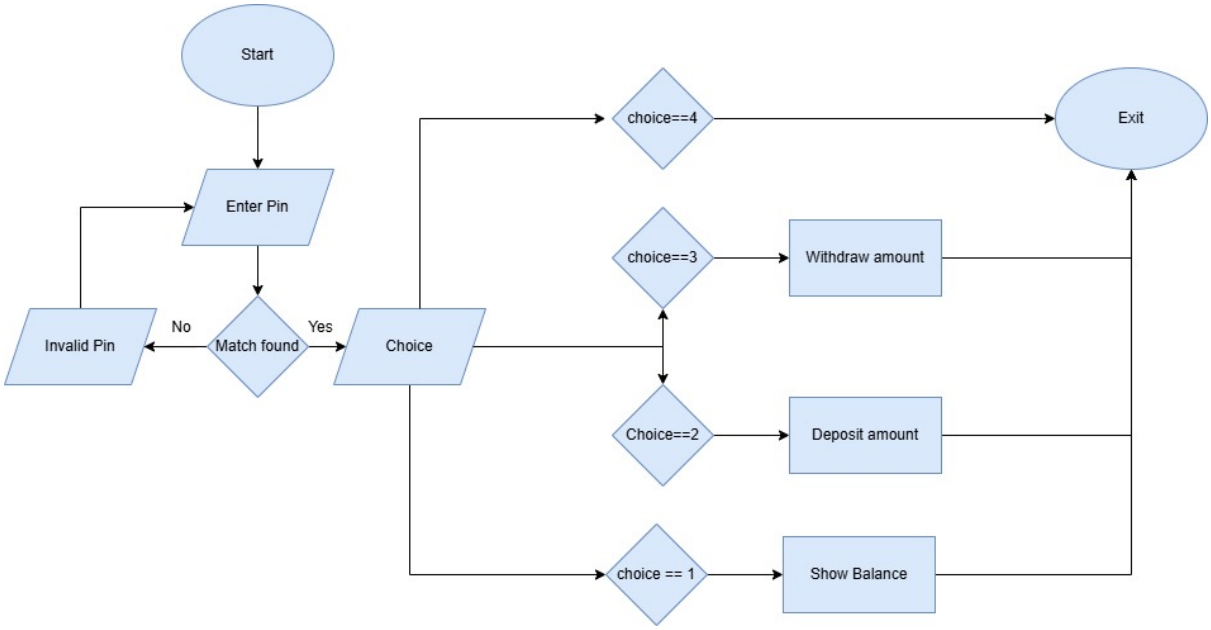
2 Requirement Analysis

2.1 Functional Requirements

- A Four digit PIN that is required to to perform all the banking operations.
- The PIN Enter by the user must be same as that of PIN stored in the data otherwise user not able to perform any banking operations on our account.
- User must Enter correct PIN in First three attempts otherwise user will be blocked
- Check Balance : Users are able to view their bank balances after entering the correct PIN
- Deposit money : Users are able to deposit cash into their bank accounts
- Withdraw Cash : Users are able to withdraw cash from their bank accounts
- Exit : User can easily exit the ATM interface by inputing the exit choice

3 Planning

- Classes: `Account` (balance, deposit, withdraw,check login, get name)
- Flow: User enters PIN → validates → menu → transactions → exit



4 Implementation / Coding

Here is the main code:

```
#include <iostream>
#include <string>
using namespace std;


class Account {
    private:
    int pin;
    string name;
        double balance;
    public:
        Account(string n,int p,double b){
            balance = b;
            name = n;
            pin = p;
        }
        bool login(int enteredPin){
            return enteredPin == pin;
        }
        string getName(){
            return name;
        }

        void checkBal(){
            cout<<"\nBalance : RS. "<<balance<<endl;
        }
        void deposit(double amount){
            balance += amount;
            cout<<"\nDeposited RS. "<<amount<<endl;
            checkBal();
        }
        void withdraw(double amount){
            if(amount > balance){
            cout<<"\nInsufficient Balance!"<<endl;
            }else{
                balance -= amount;
                cout<<"\nWithdrew RS. "<<amount<<endl;
                checkBal();
            }
        }
};
int main(){
    Account acc[3] = {
        Account("Gurkirat Singh",1313,5000),
        Account("Gurveer Singh",1234,3000),
        Account("Gursimran Singh",1111,7000)
    };

    int pin = 0;
    bool match = false;
    int index = 0;
    cout<<"\nThis is simple ATM interface\n";
    while(match == false){
    cout<<"Enter your PIN: ";
```

```
    cin>>pin;
    for(int i=0;i<3;i++){
        if(acc[i].login(pin)){
            match = true;
            index = i;
            break;
        }
    }
    if(!match){
        cout<<"Invalid PIN. Try again later"<<endl;
    }}
    int choice;
    double amount;
    do{
        cout<<"\n ATM Menu\n";
        cout<<"1. Check Balance\n";
        cout<<"2. Deposit\n";
        cout<<"3. Withdraw\n";
        cout<<"4. Exit\n";
        cout<<"Enter your choice: ";
        cin>>choice;
        switch(choice){
            case 1:
                acc[index].checkBal();
                break;
            case 2:
                cout<<"Enter amount to deposit: ";
                cin>>amount;
                acc[index].deposit(amount);
                break;
            case 3:
                cout<<"Enter amount to withdraw: ";
                cin>>amount;
                acc[index].withdraw(amount);
                break;
            case 4:
                cout<<"Exiting..."<<endl;
                break;
            default:
                cout<<"Invalid choice. Try again."<<endl;
        }
    }while(choice != 4);
    cout<<"Thank you for using the ATM!"<<endl;
}
```

5 Testing / Output

- Successfully tested 3 user accounts.
- Operations: check balance, deposit, withdraw.

```
Sample Run:

This is simple ATM interface
Enter your PIN: 1111

 ATM Menu
1. Check Balance
2. Deposit
3. Withdraw
4. Exit
Enter your choice: 1

Balance : RS. 7000

 ATM Menu
1. Check Balance
2. Deposit
3. Withdraw
4. Exit
Enter your choice: 2
Enter amount to deposit: 3000

Deposited RS. 3000

Balance : RS. 10000

 ATM Menu
1. Check Balance
2. Deposit
3. Withdraw
4. Exit
Enter your choice: 3
Enter amount to withdraw: 2000

Withdrew RS. 2000

Balance : RS. 8000

 ATM Menu
1. Check Balance
2. Deposit
3. Withdraw
4. Exit
```

```
Enter your choice: 4
Exiting...
Thank you for using the ATM!
```

6 Conclusion

The basic Simple ATM Interface is functional using object oriented programming.