# Software Requirements Specification

**For**

# ATM

**Version 1.6 approved**

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# Revision History

| Name | Date | Reason For Changes | Version |
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| Class Diagram | | Addition of Class Diagram | 1.1 |
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| Sequence Diagram | | Addition of Sequence Diagram | 1.3 |
| Collaboration Diagram | | Addition of Collaboration Diagram | 1.4 |
| State Chart Diagram | | Addition of State Chart Diagram | 1.5 |
| Activity Diagram | | Addition of Activity Diagram | 1.6 |

# 1. Introduction

## 1.1 Purpose

The purpose of this document is to present a detailed description of ATM machine.
It will explain the purpose and feature of the ATM, What type of operation it can perform.

## 1.2 Document Conventions

This Document was created based on the IEEE template for System Requirement Specification Documents. We also use Star UML software for drawing all diagram.

## 1.3 Intended Audience and Reading Suggestions

- Software designers
- Software testers
- Software developers
- Bank staff
- Customers

## 1.4 Product Scope

ATM machine has vast use in our daily life. It allow us to withdraw cash, check balance, and receives account updates. In some ATM we can also deposits cash as well as PIN generation.

# 2. Overall Description

## 2.1 Product Perspective

An ATM is a digital electronic device which is used for different purposes. Nowadays Customers of any bank can use any ATM anywhere. Customer can withdraw cash without help of a bank staff.
There are one unique PIN is provided by bank on each ATM card for security purposes.
CVV number and date of expiry are also given on card for security purpose.

## 2.2 Product Functions

Using ATM, customer can access their bank accounts from which either they withdraw cash or Check balance. In some of ATM features like Deposit cash as well PIN generation is also given.

## 2.3 User Classes and Characteristics

a) User
This actor is a person who uses the software.

b) ATM
This actor represents the feature provide by bank for anywhere transaction. It is responsible for verifying customers, authorizing transaction and making record of complete transaction.

## 2.4 Operating Environment

The ATM is a network based mechanical device and shall operate in all environments

## 2.5 Design and Implementation Constraints

Some of the constraints that have to be taken care of with respect to the software development could be the platform where the software is to be run should have an access to MS-ACCESS. The end user needs to have basic computer knowledge.

## 2.6 User Documentation

In some of the ATM there are guards those who help in operating ATM. Online help option is also provided in ATM in which a user can read each and every features provided by banks. The user manual is also provided as a hard copy.

## 2.7 Assumptions and Dependencies

1. Hardware never fails
2. ATM casing is impenetrable
3. Limited number of transactions per day (sufficient paper for receipts)
4. Limited amount of money withdrawn per day (sufficient money)

# 3. External Interface Requirements

## 3.1 User Interfaces

The customer user interfaces should be very easy, such that 99% of users can use this feature without help of assistance.

## 3.2 Hardware Interfaces

These are following hardware specification:

- Read ATM card.
- Touch screen for better use
- Input taken by user
- Inbuilt camera
- Cash count
- Receipt

## 3.3 Software Interfaces

The software interface are specific to target banking software system.
1. Language supported: JAVA(Front end)
2. Database: MS-Access (Back end)
3. MS-Office
4. Star UML

## 3.4 Communications Interfaces

The communication between bank and customer must be healthy. There should be clear instruction for user like how to use ATM and if there is any issues to whom customer have to contacts. User experience must be good and communication must be bilateral.

# 4. System Features

The key features of ATM are-

- Cash withdraw
- Cash Deposit
- Checking account balance
- Atm card generation
- Reduce bank work load

## 4.1 System Feature 1

## 4.2 System Feature 2 (and so on)

### 4.1.1 Login

This is a use case used to verify the authentication of the user. In this the user gives his allotted pin number as input, the system the verifies whether the card number and pin number stored in data base
matches or not, if it matches then it allows the user to use the system else it asks to enter the pin number again.

#### 4.1.2 Balance Enquiry

This use case is used to check the balance in the user account. After every transaction the balance in the user's account is updated by taking data consistency into consideration and the updated account balance is displayed to the user.

#### 4.1.3 Withdrawal

This use case facilitates the user to withdraw money from his account. After the money is withdrawn
it is updated in the user's account.

# 5. Other Nonfunctional Requirements

## 5.1 Performance Requirements

It must be able to perform in adverse conditions like high/low temperature etc. Uninterrupted interrupted connections High data transfer rate

## 5.2 Safety Requirements

- Must be bolted in wall or floor to protect it from any type of theft.
- There must be a digital door out side ATM so no one can enter without card and those to swipe card for entrance their card detail must be saved for Security purpose only.
- There must be emergency number which must be active 24 hours for any emergency.
- There must be security camera.

## 5.3 Security Requirements

- Customers are advised not to share their PIN with anyone.
- They are also advised to change their pin after first use.
- The maximum allowed no on entering wrong PIN number is three.
- There information must be kept secured.

## 5.4 Business Rules

- Customer personal information should be secured.
- Atm should be regularly filled with money for money circulation.
- ATM should be secure.
- User experience must be good.

# 6. Other Requirements

The ATM should be implemented on computers with 50Mbytes free space on HDD for Database (80Gbytes for server) and 32Mbytes RAM for Database (256Mbytes for server)

The ATM should correctly interface if MS Access applications and MS SQL Server.

# Appendix A: Glossary

ATM – Automated Teller Machine

PIN – Personal Identification Number

UI – User Interface

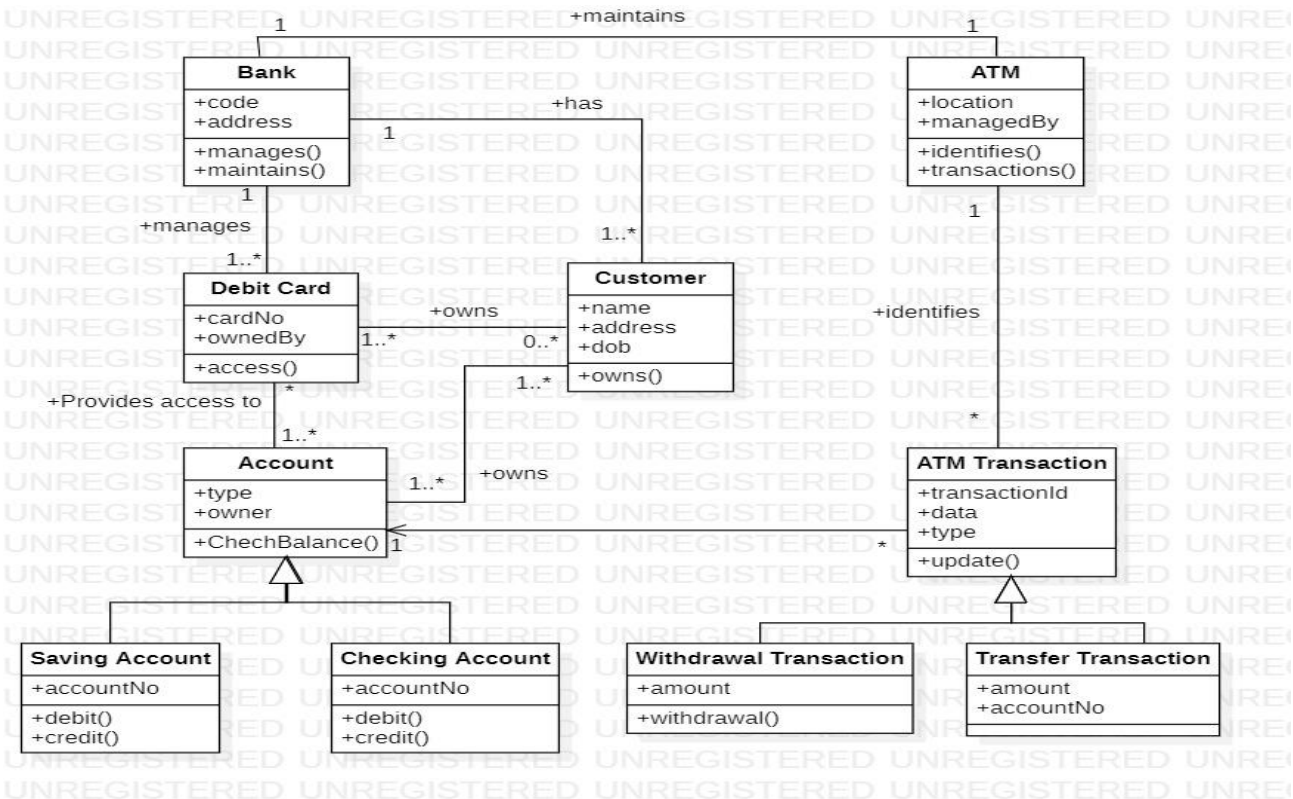
CVV – Card Verification Number

UML – Unified Modeling Language

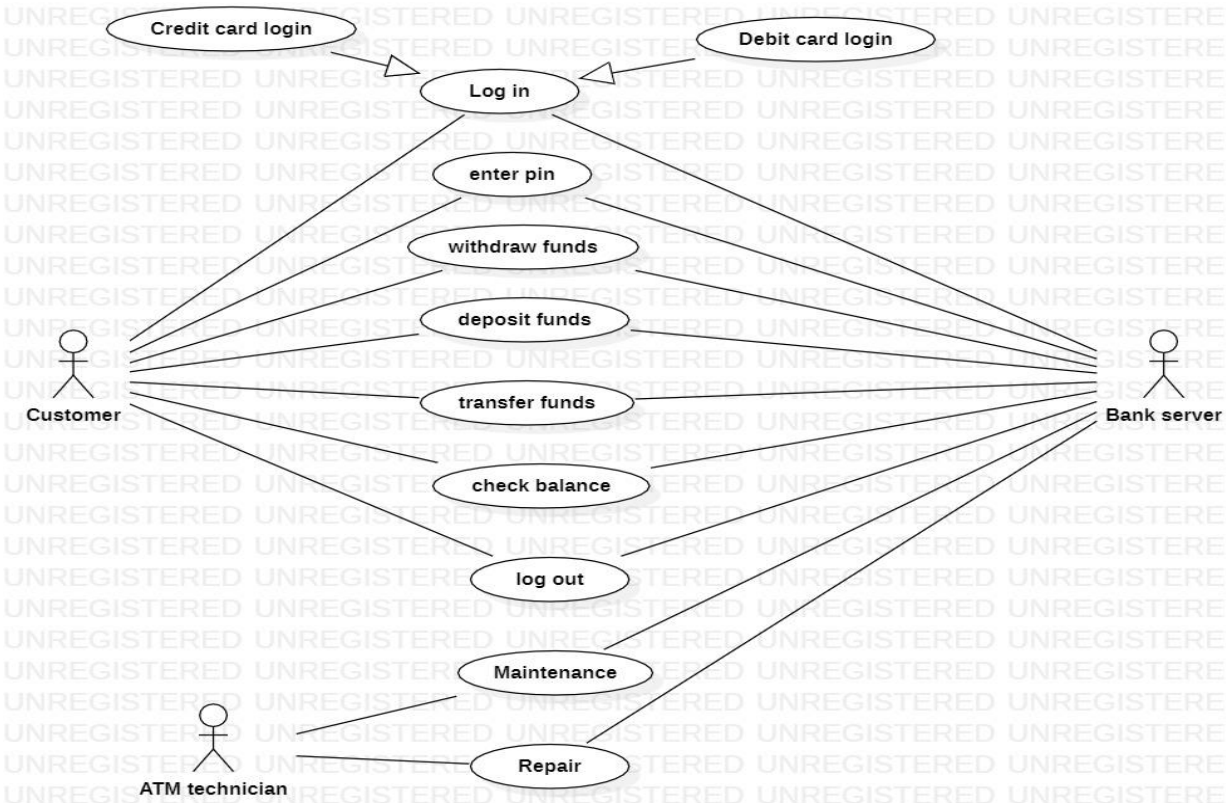
MS – Microsoft

# Appendix B: Analysis Models

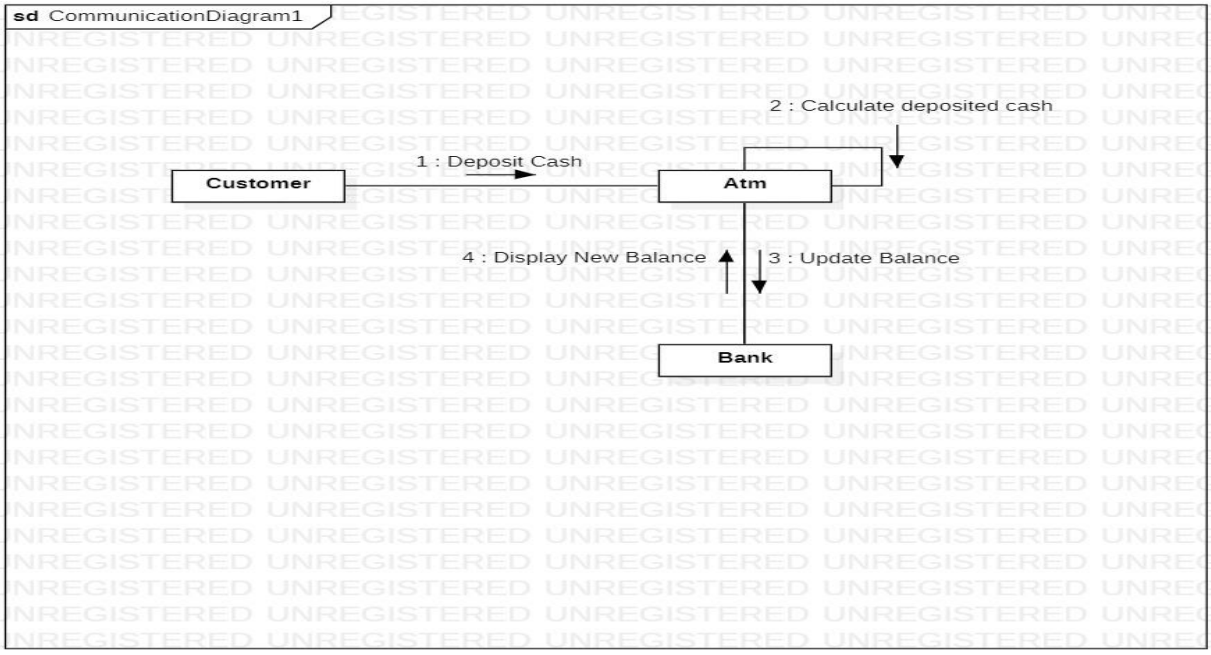
**CLASS DIAGRAM**

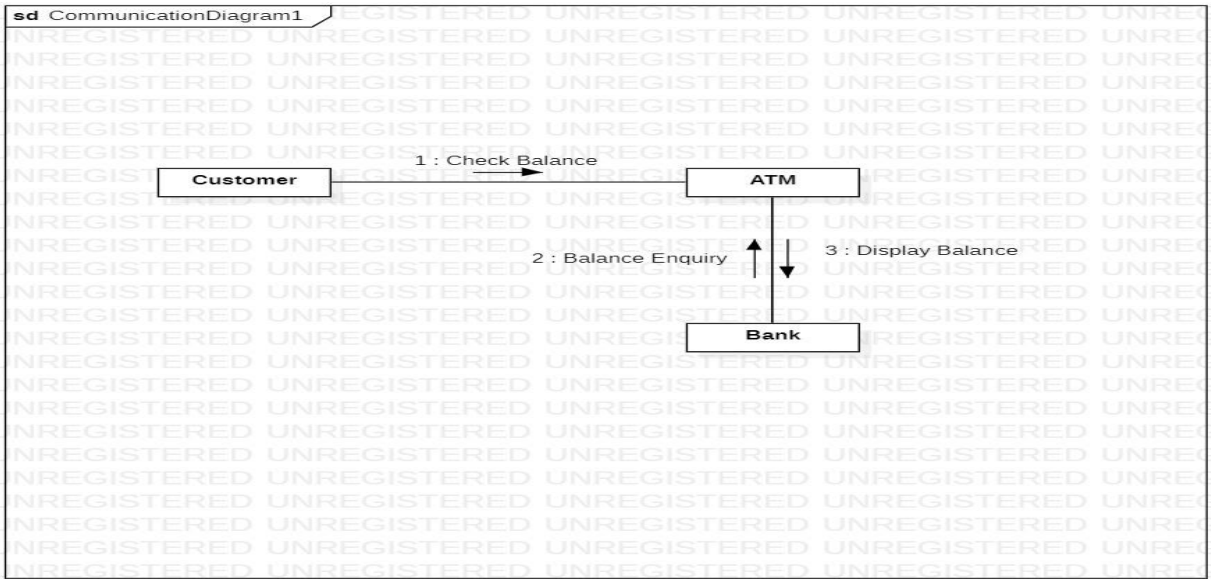


## Use case diagram

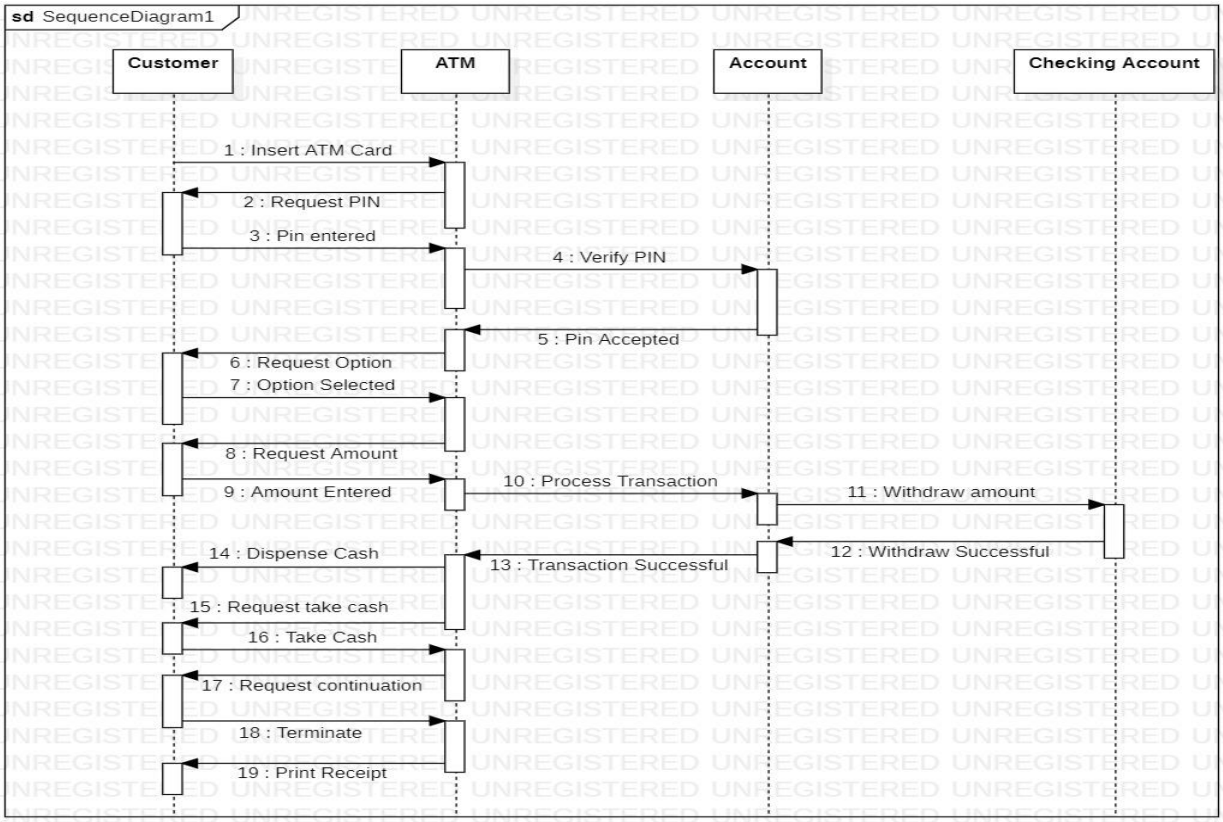



## Collaboration diagram

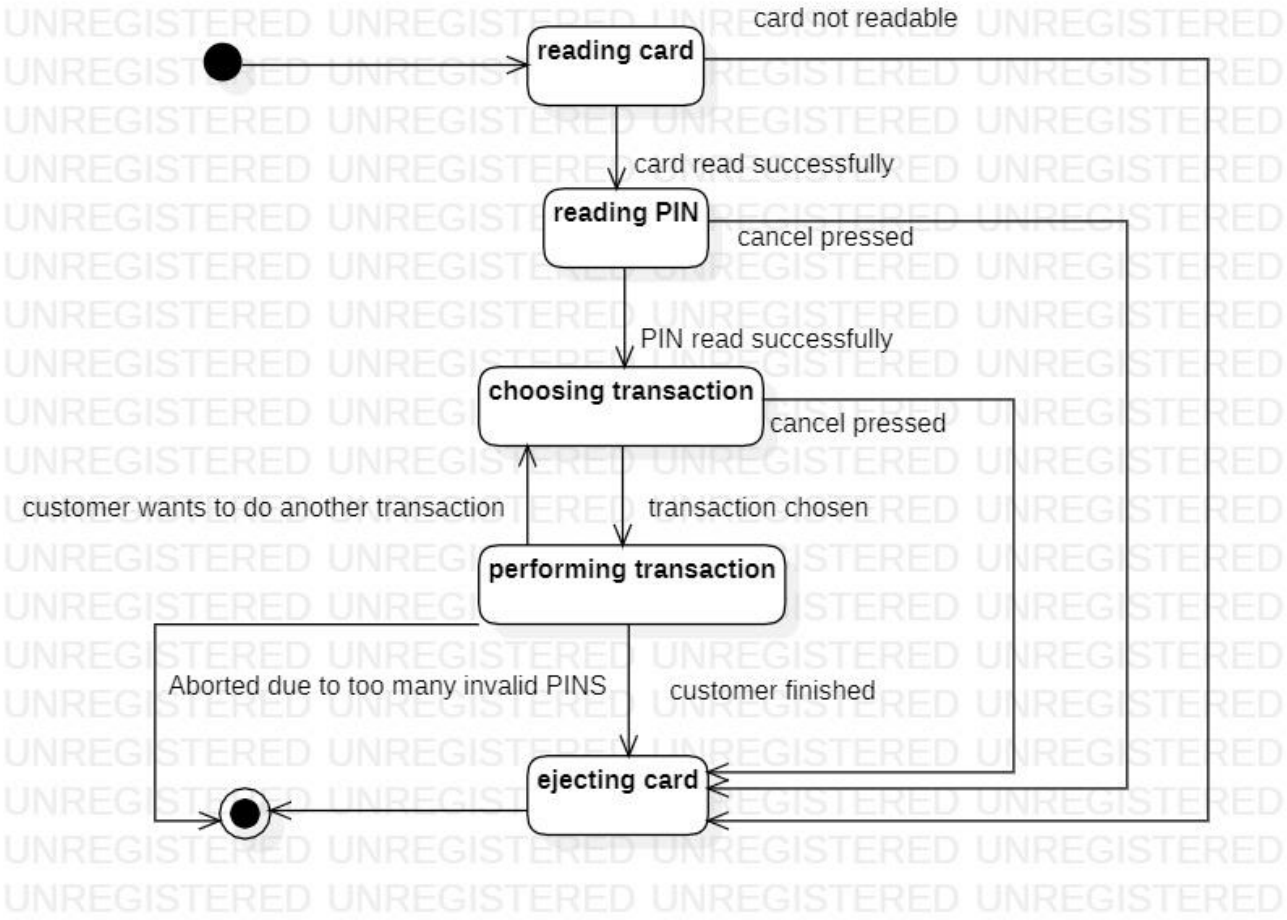




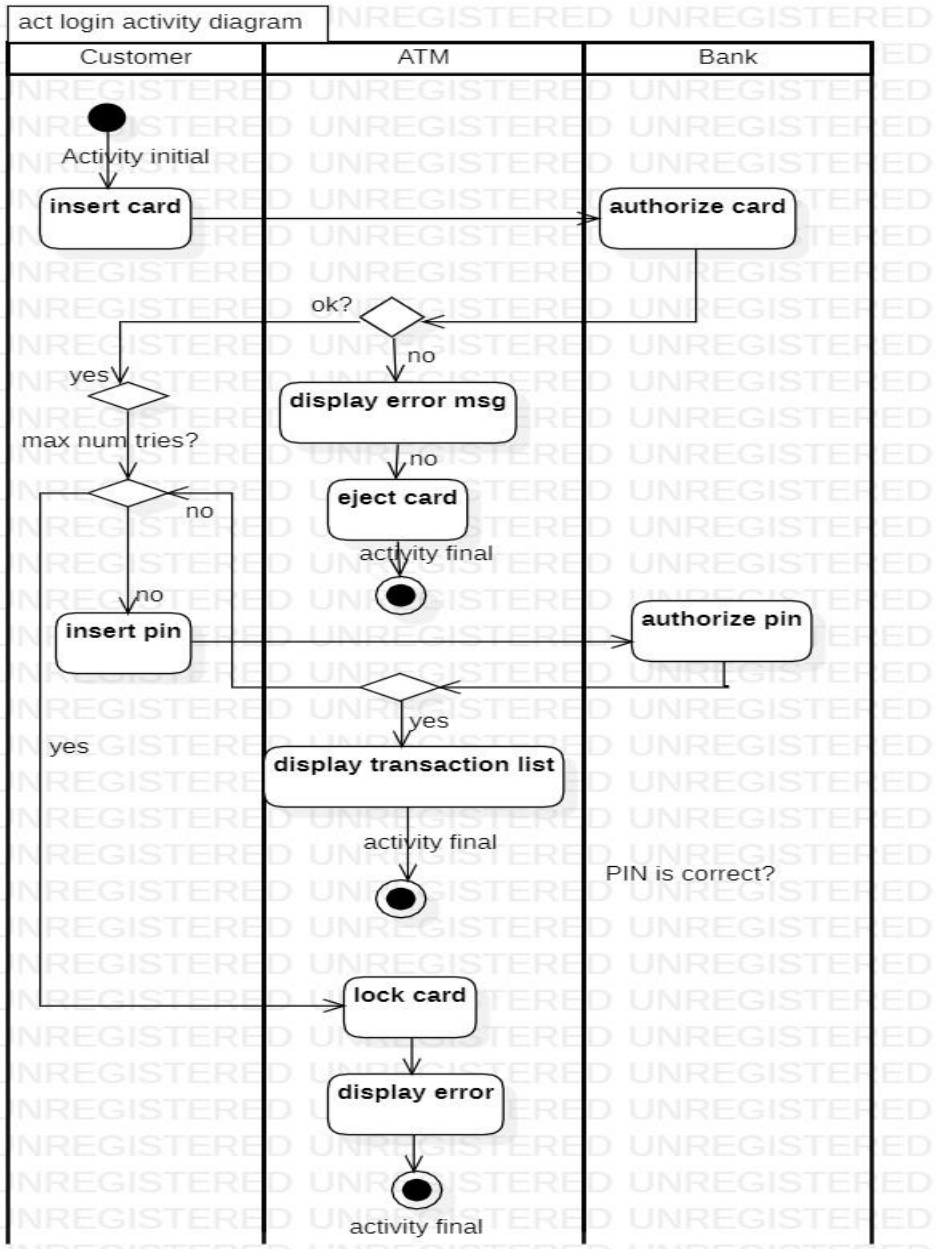

## Sequence diagram

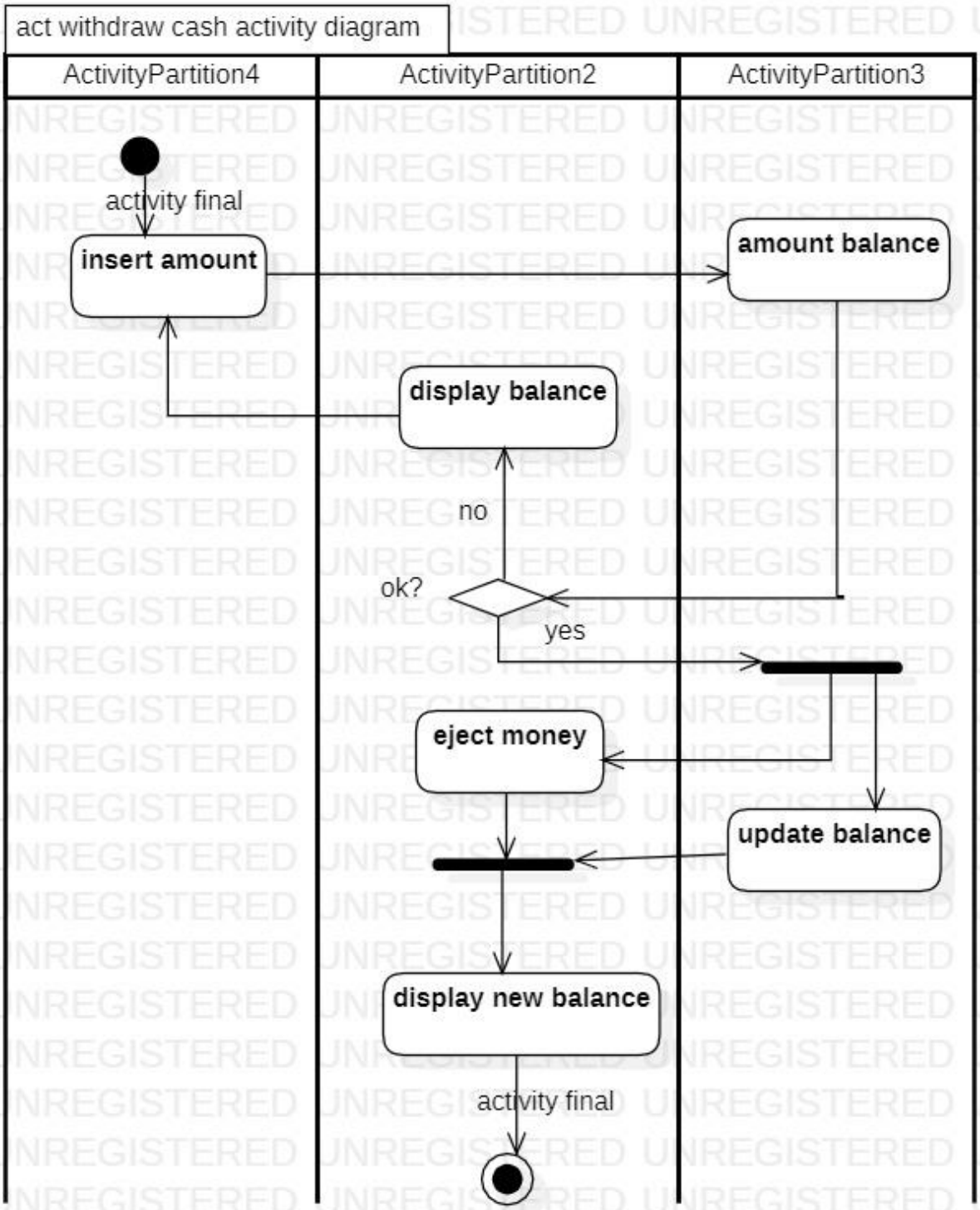


## State diagram



## Activity diagram




act withdraw cash activity diagram
ActivityPartition4
ActivityPartition2
ActivityPartition3
activity final
insert amount
amount balance
display balance
no
ok?
yes
eject money
update balance
display new balance
activity final