CSIS 2013
System Analysis and Design
Semester Project

Cyber Café Management System

Submitted to:
Yang Chee Beng

Submitted by:

Name	Student ID	Batch
Eu Xin Hong	D170486C	CS17-C
Sim Yang Ping	EP170001C	CS17-C
Thong Zi Sheng	D170431C	CS17-C

12th July 2018
Semester B 2018

Table of Contents

1.0 INTRODUCTION

1.1 Introduction to Cyber Café Management System

Cyber cafés have been existed for a long time, it is mainly an entertainment center provided with the state of the art PC's and high speed internet connection. Targeting all age of customers from students whom usually hang out and play games in the cyber café after school to adults that needed to complete reports that requires computers. As technology evolves, so does the management system for cyber cafes. Back in the old days there aren't that many high tech systems to manage cyber cafes. But nowadays the 818 Cyber Café Company has bought a management system to manage its franchise from storing member's data to even activate the PC's remotely in cyber café, the system also link up with multiple cyber café's throughout its franchise through the internet. Opening an opportunity for the most effective management system yet. 818 Cyber cafés currently uses the B3 Café Cloud Service. Hence, we would conduct system analytic and design and improve this system through this course.

1.2 Functional Requirements

1.2.1 Registering as member
The system allows the staffs to register a client for a membership with just a swipe of their Identification Card (IC) and assign them a membership card with a unique ID and password with ease and almost instantly.

1.2.2 Remotely activate and disable PC's
The system allows the staffs to be able to remotely activate, deactivate and change the PC's status. This proves useful when non-member clients that are experience technical difficulties with their current PC's in the cyber café. The staffs can simply help them switch to a different PC while they fix the broken one. This will save the client's time while let the staffs manage the computers (PC's) with ease.

1.2.3 Top up credit for members
Members have the advantage of making advance top-up credits for their member account. While the system stores the balance of the member's credit for every member. The system must have outstanding security measures to protect the client's sensitive data while protecting this from exploit. This will save the member's valuable time from always queueing to top up or buy credits (like non-members) during peak hours as they can top up anytime they want even if they do not need to use it now.
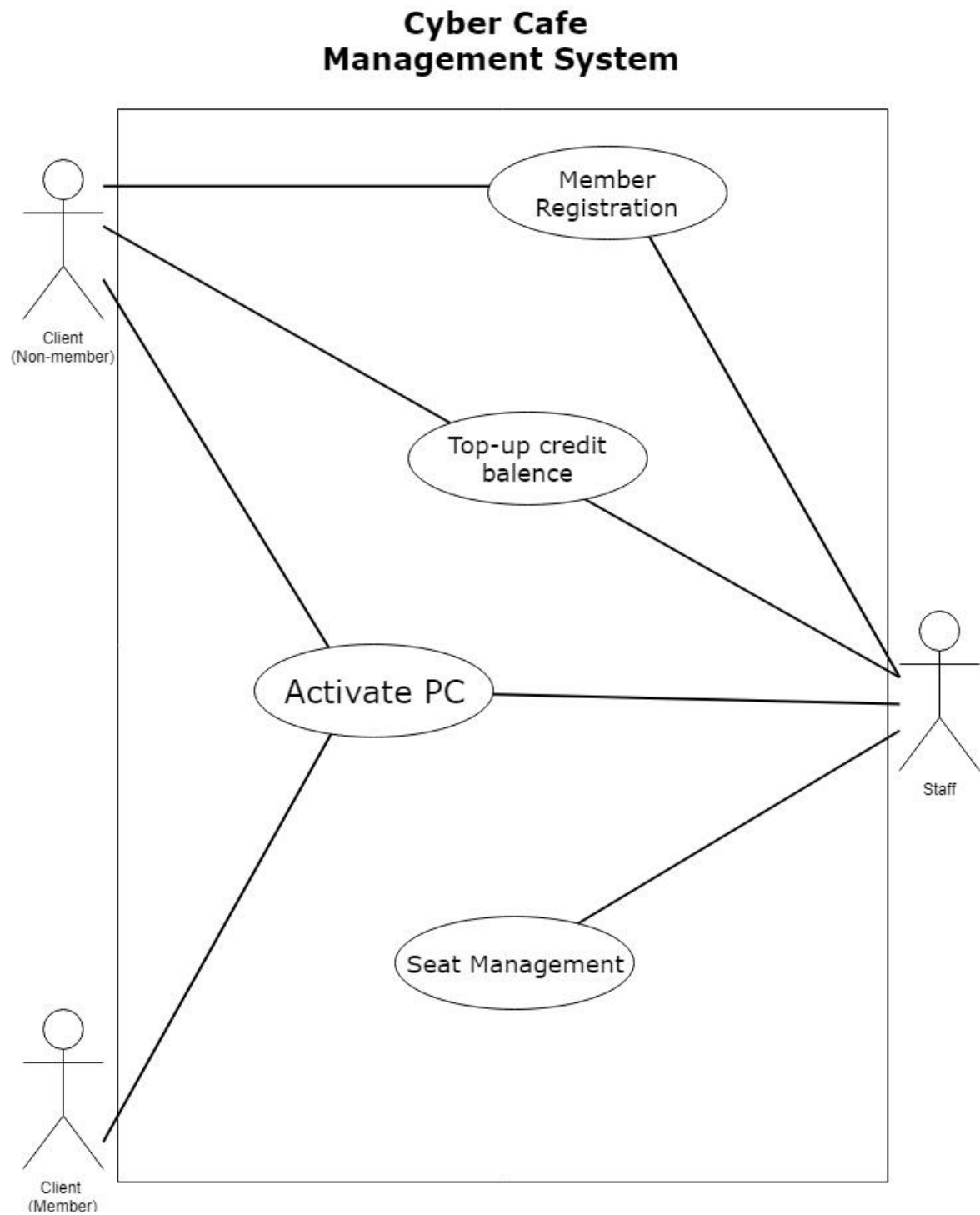
1.2.4 PC Activation
The system allows the staffs to be able to monitor and check and verify that the member's logs and PC usage is legit with their credits spent while the staffs can generate coupons that consists of credits and a time limit for non-members to activate upon purchase with ease.

1.3 Objectives

|	
1.3.1 Enhancement	Increase the security of the system and user's privacy data.
1.3.2 Automation	We plan to make the PC Activation for non-members to be fully automated in the future. Non-members can purchase the coupons without the assists of the staffs.
1.3.3 User Friendly	The user interface of the Cyber Café Management System should be user friendly, simple design and easy to use. In order to let new staffs familiar with the system in short amount of time and maximize service efficiency.
1.3.4 Accuracy	With the franchise growing continuously and more PC's are on the way to be available soon, there will be more transactions going on. Concurrency will be increase, therefore, the system should be fast and accurate especially in the member top up system and PC activation. To reduce the chance of interference and clashing of data.
1.3.5 Availability	The management system should be available in every 818 Cyber café franchise. Due to the membership system, it is required that the Management System to be linked with every other 818 cyber cafes to keep things up to date.

2.0 USE CASE DIAGRAM

Cyber Cafe
Management System

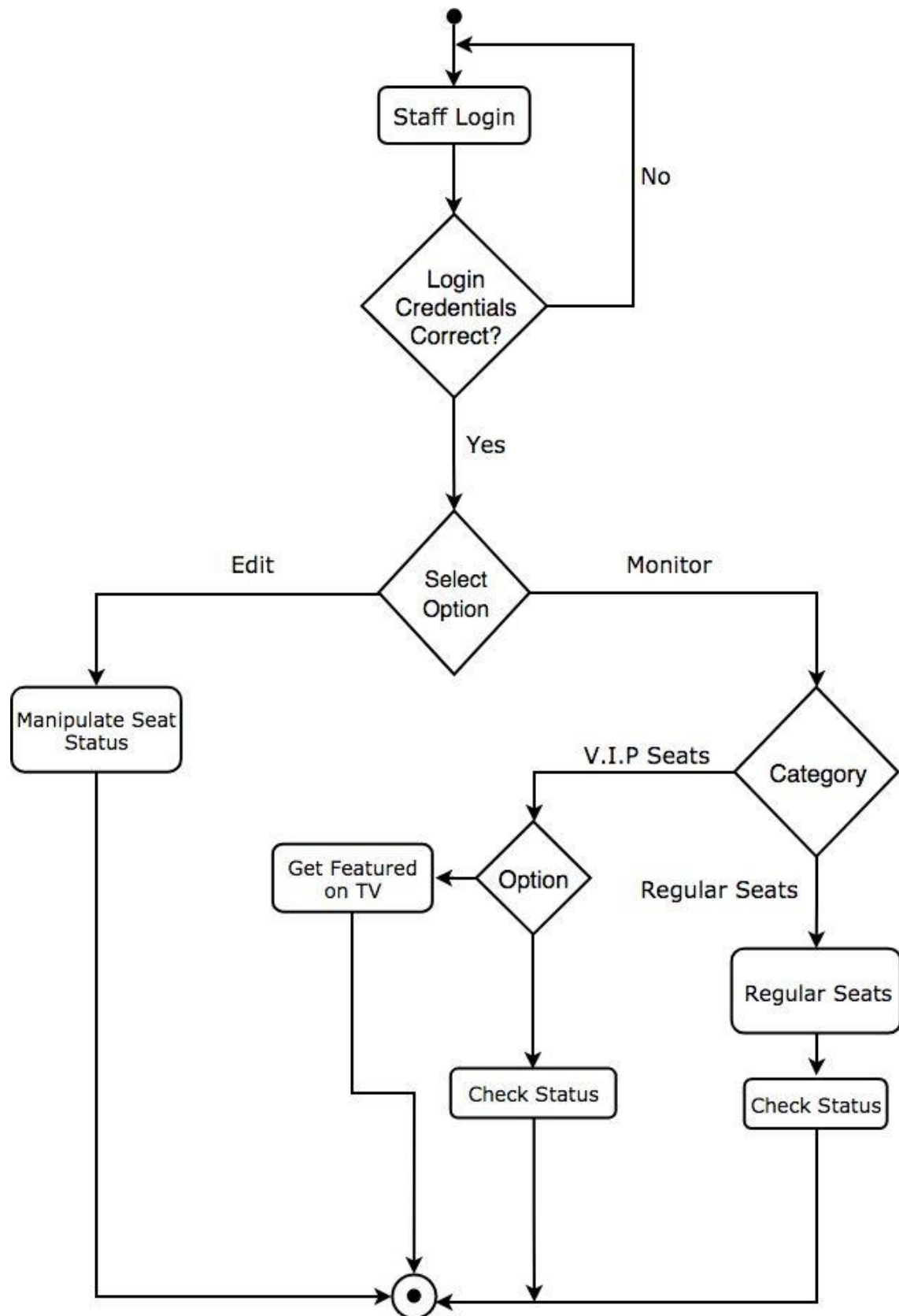# 3.0 ACTIVITY DIAGRAM

3.1 Member Registration
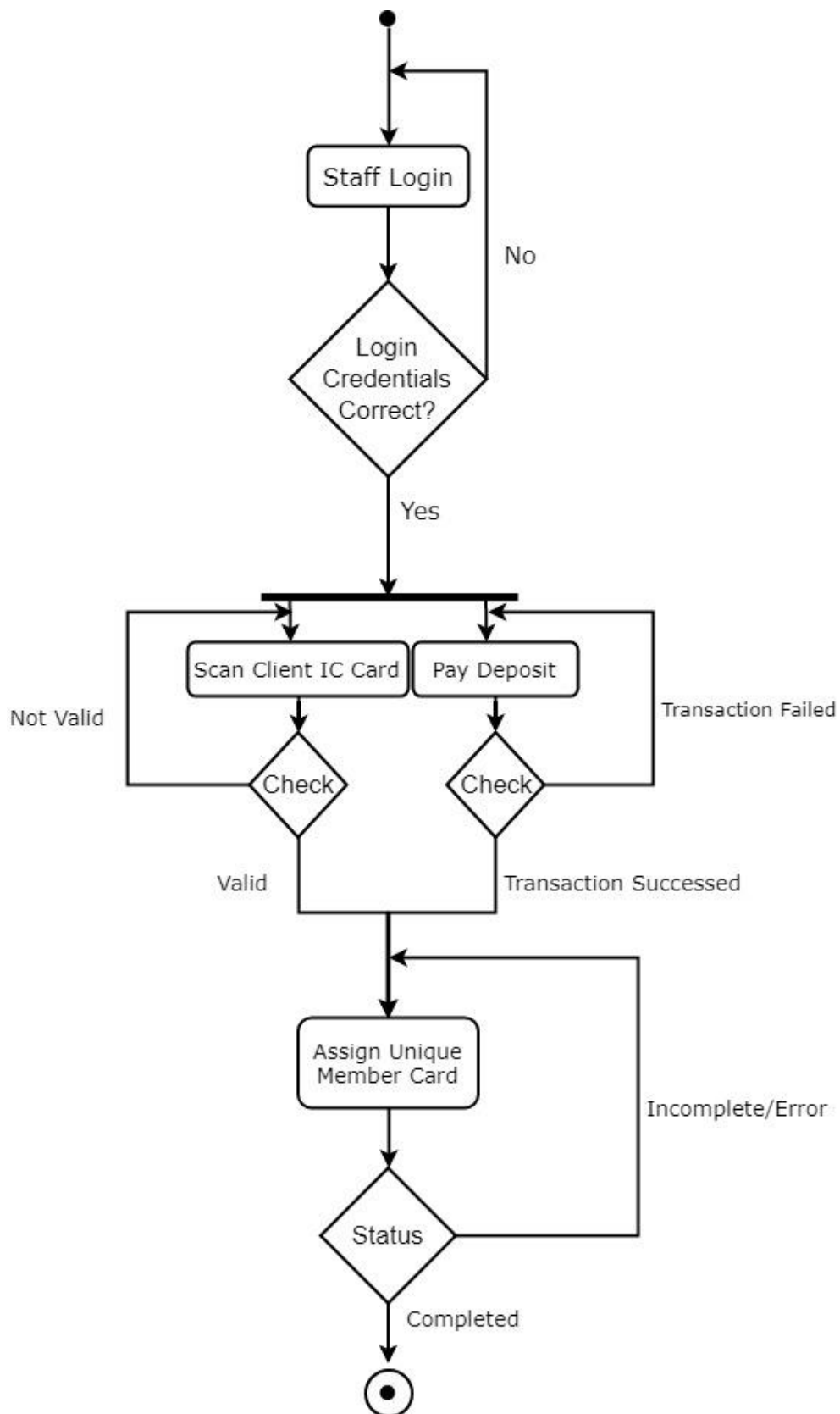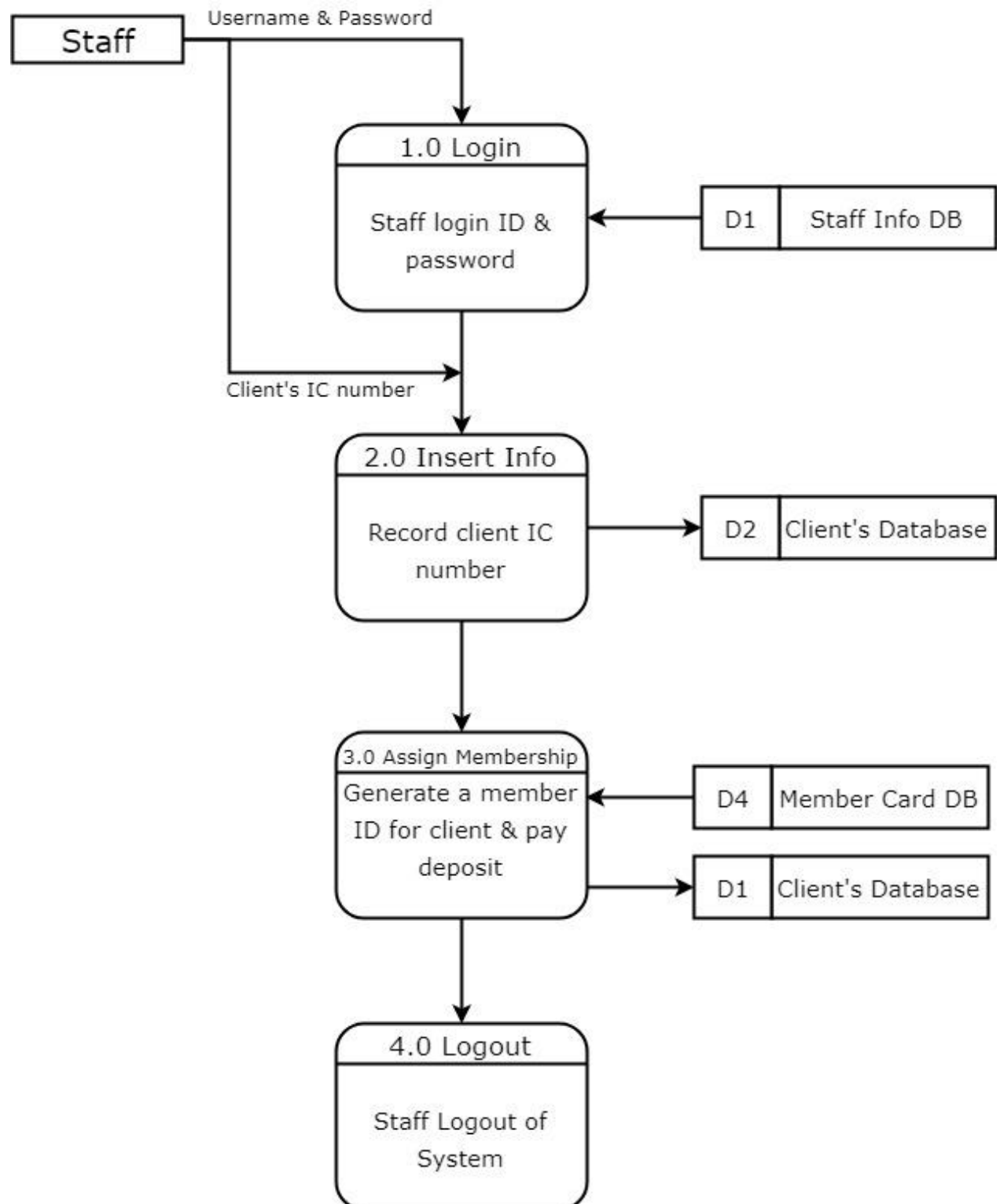
3.2 Top Up Credit Balance
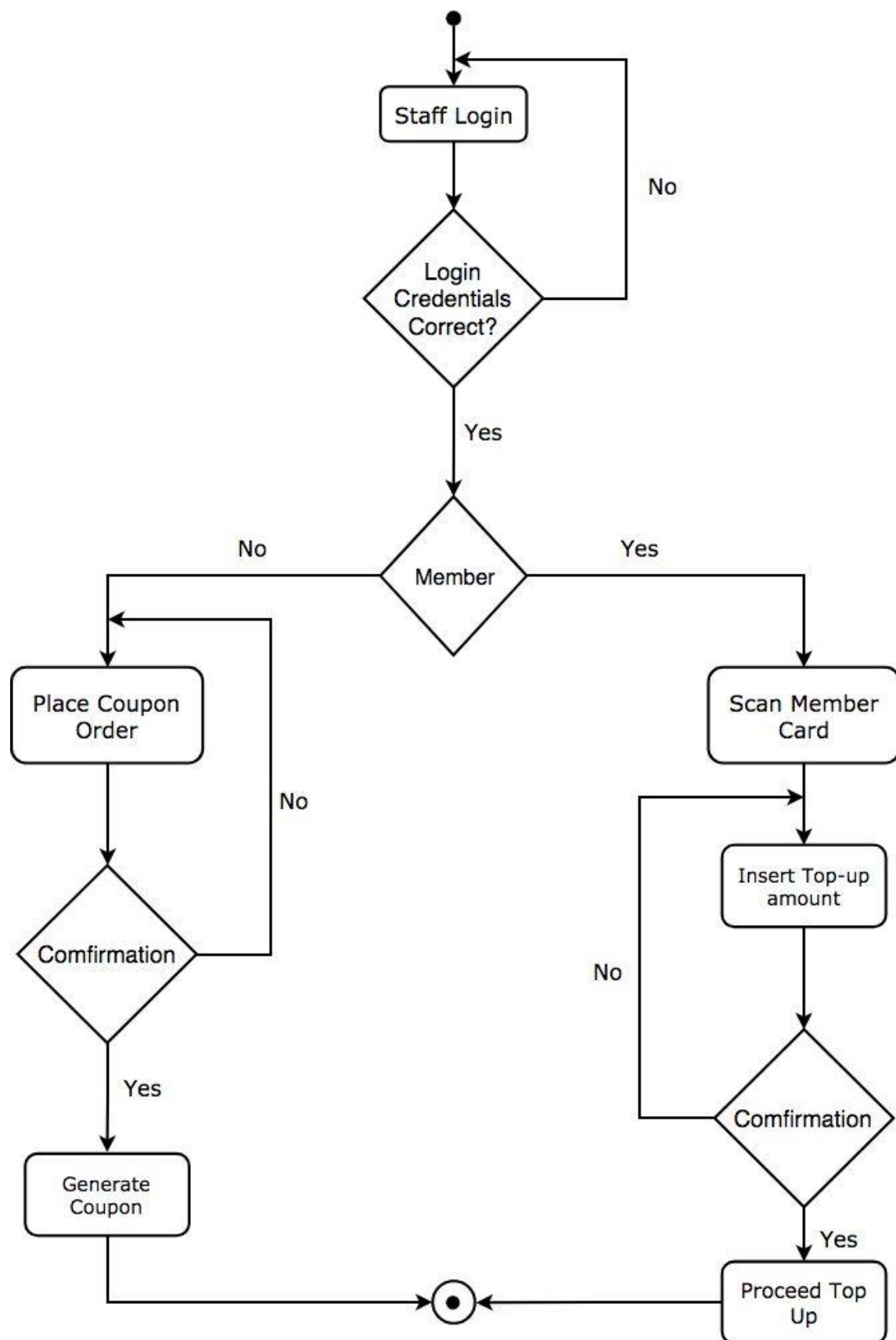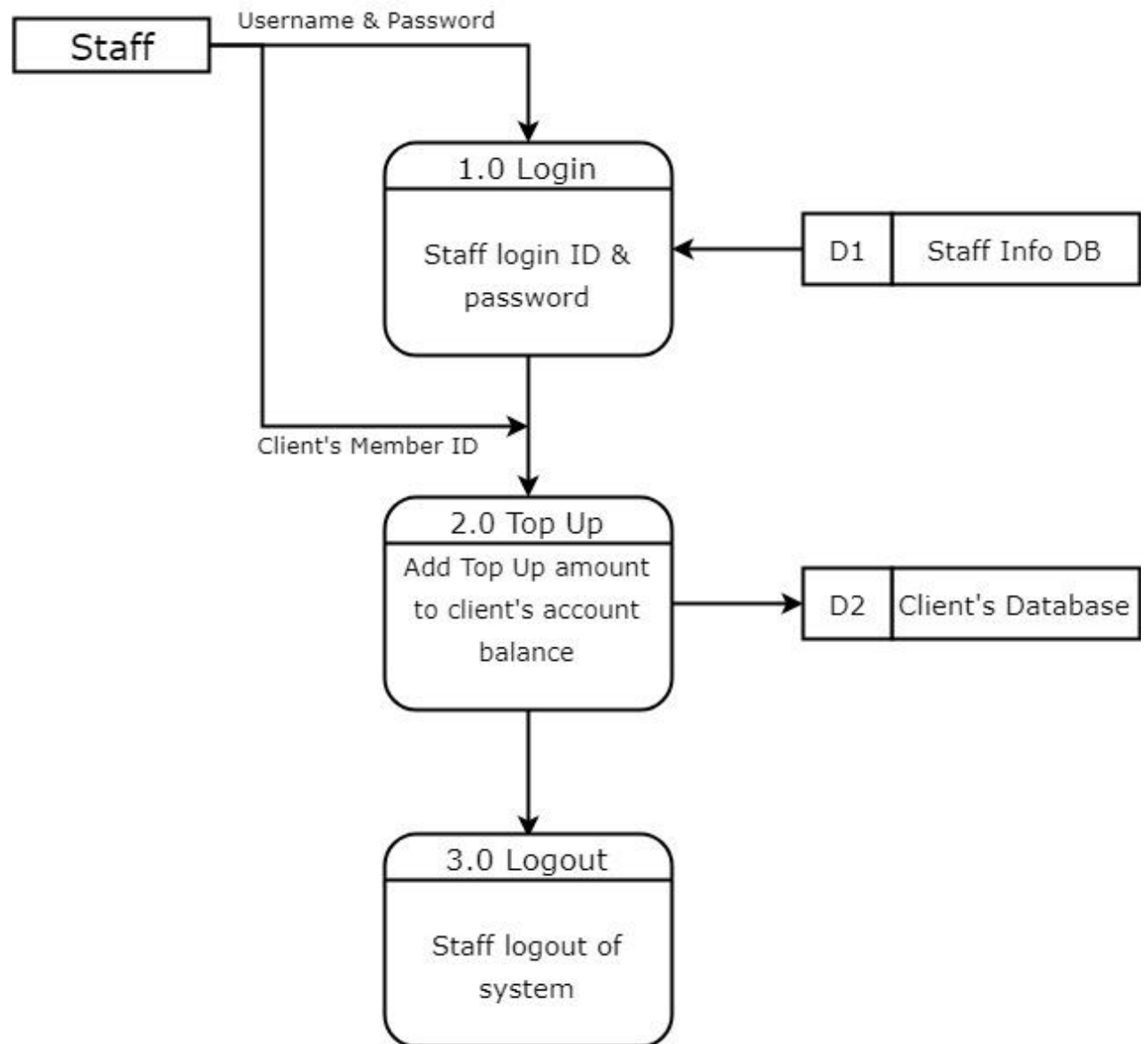
3.3 Activate PC
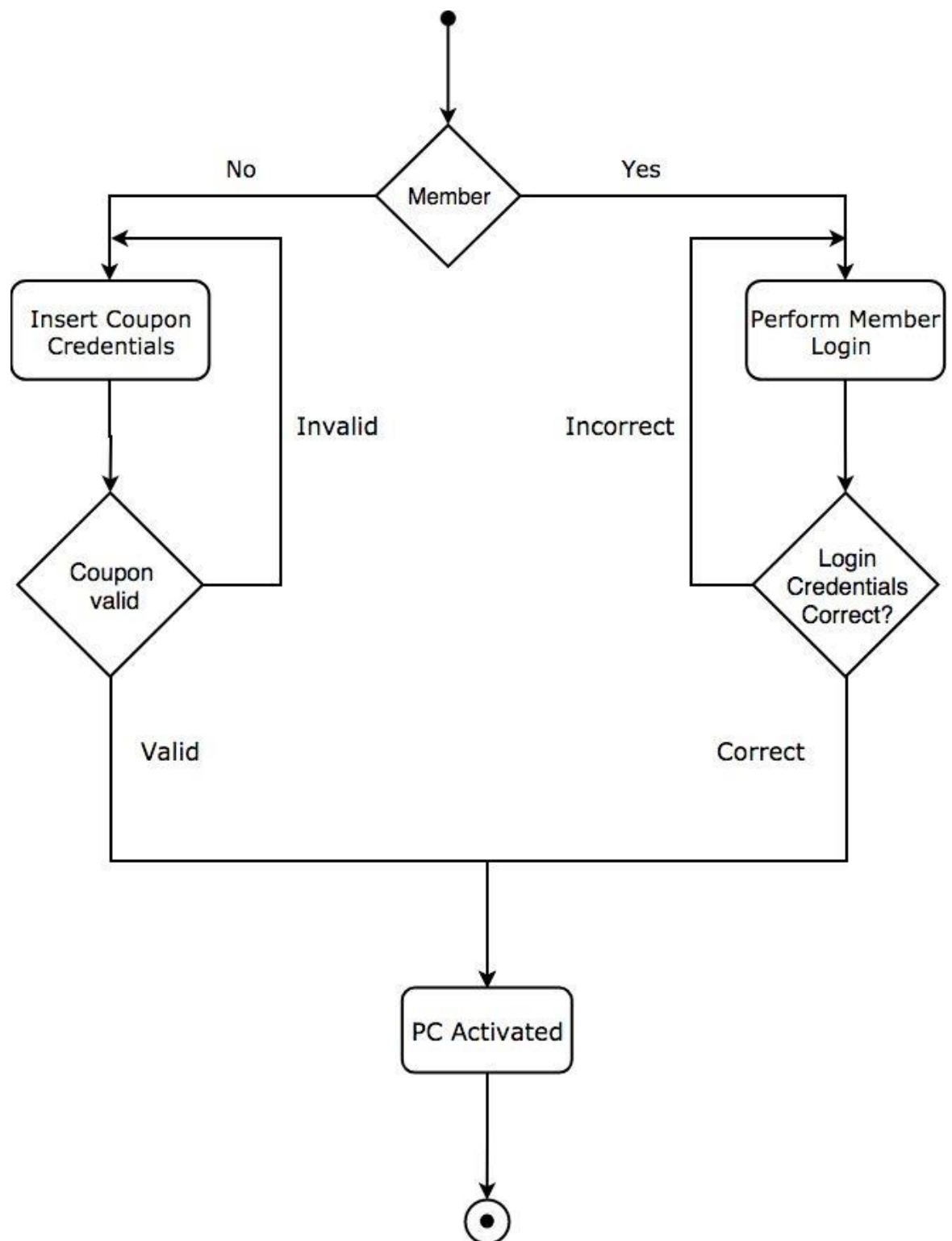
3.4 Seat Management
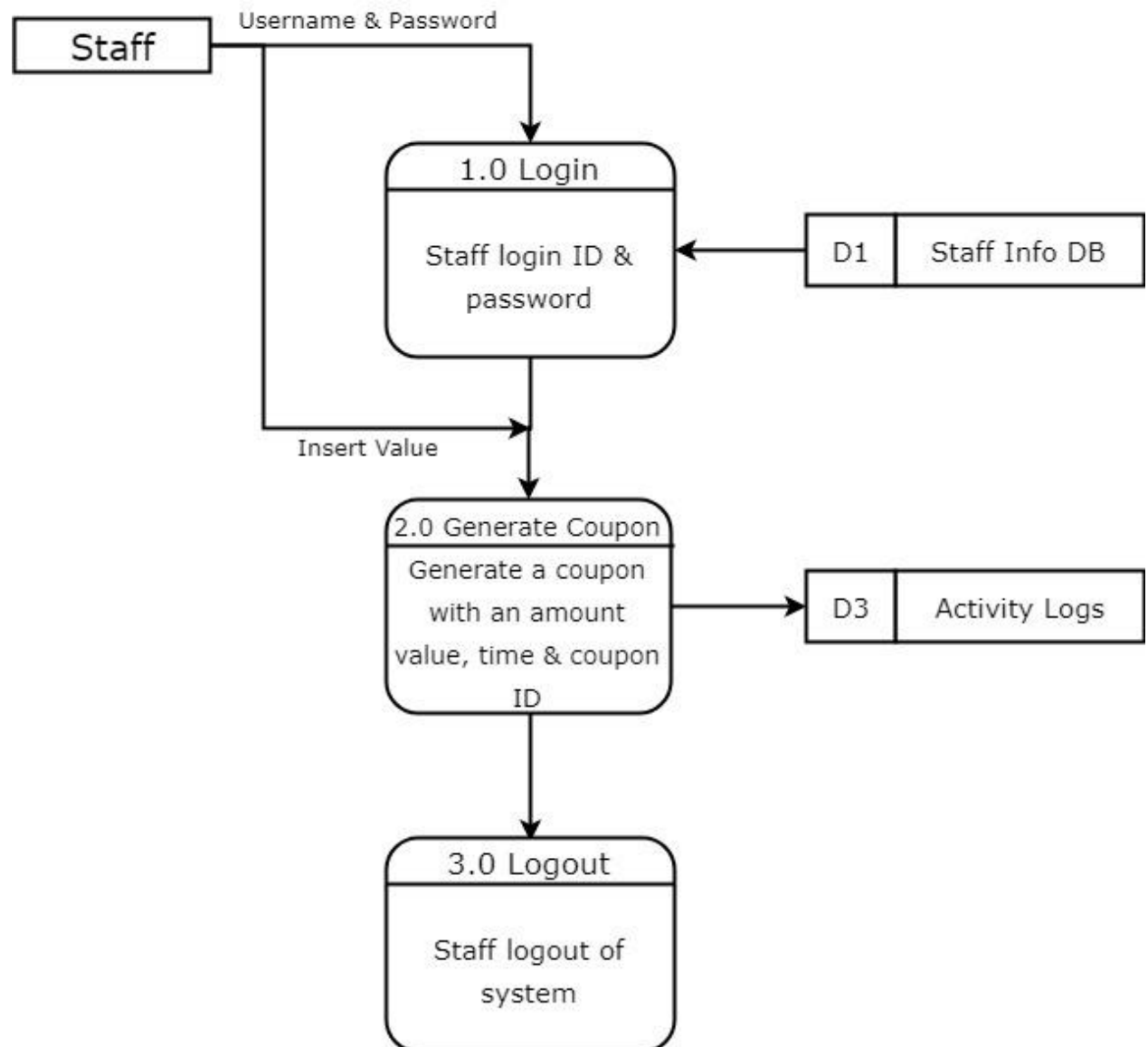
4.0 DATA FLOW DIAGRAM
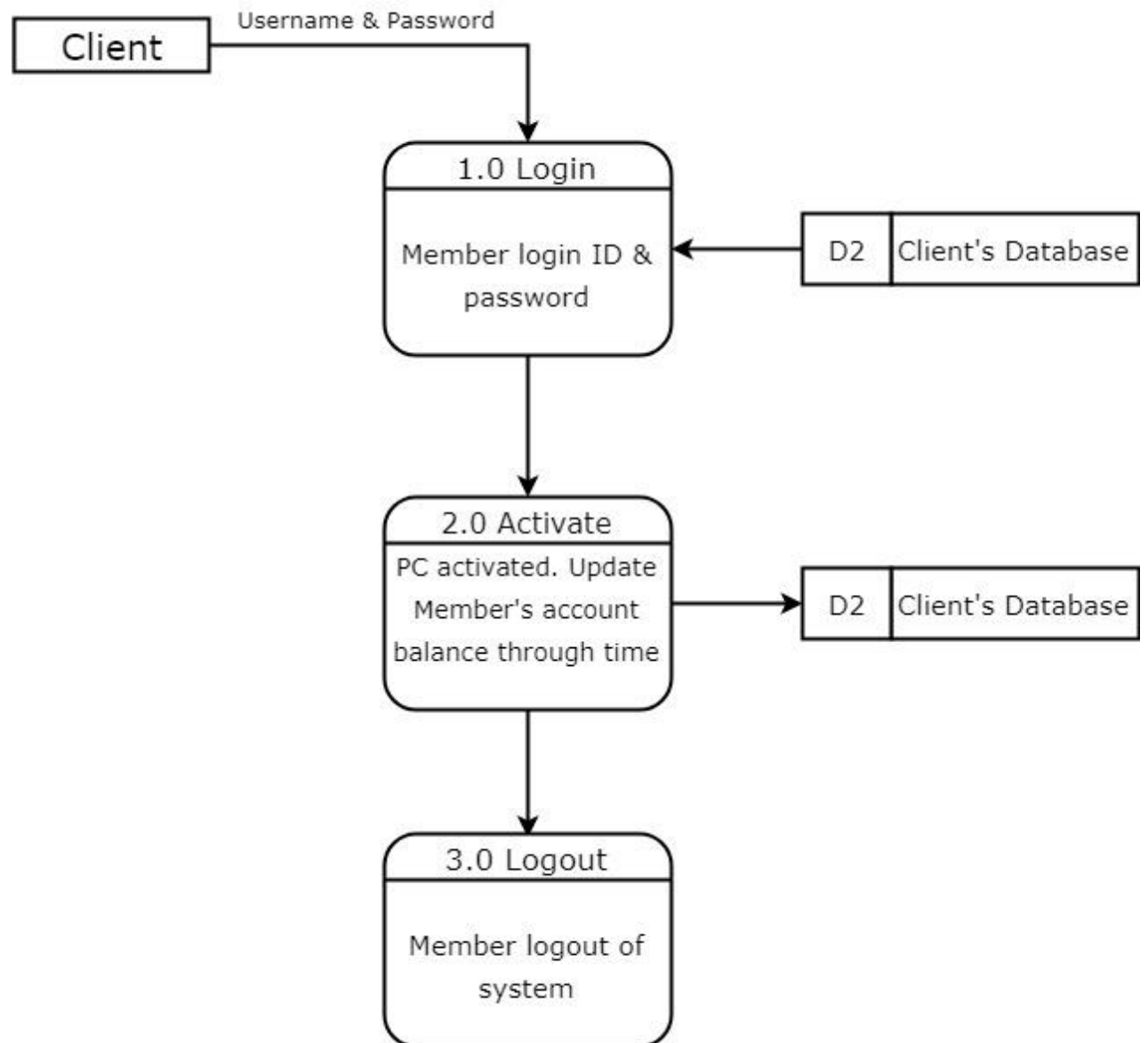
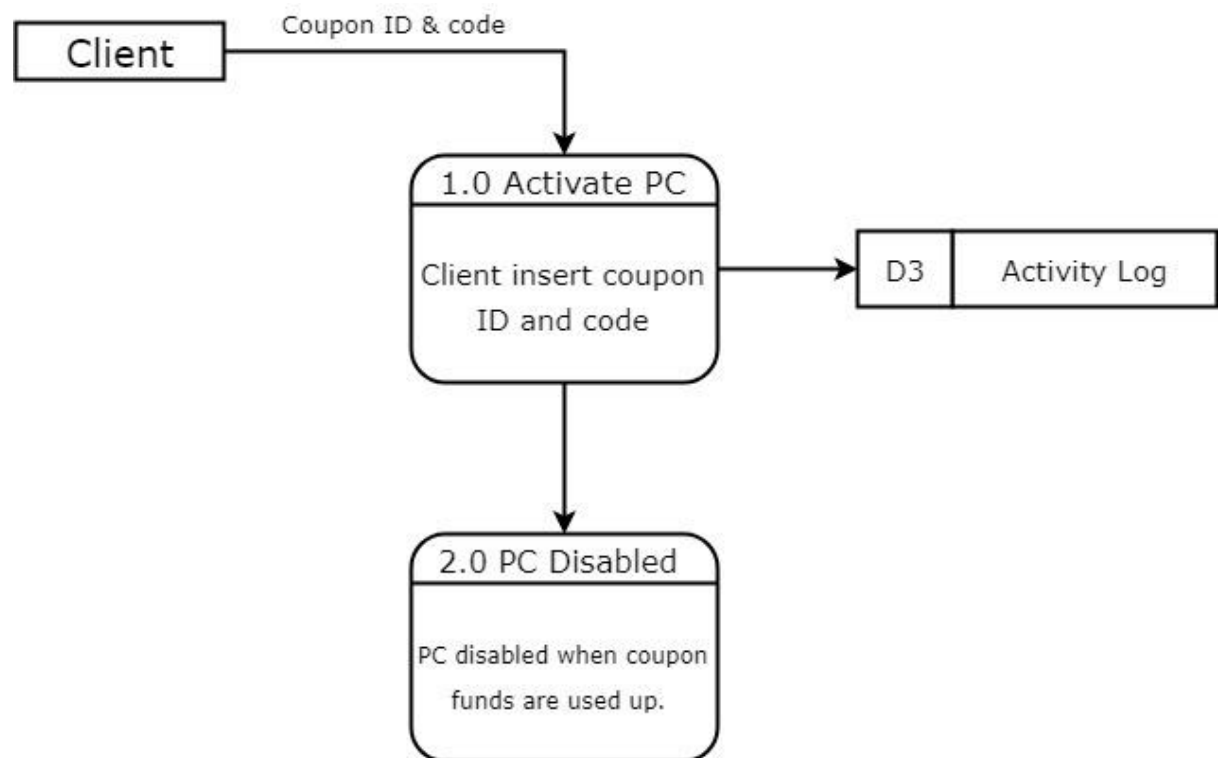## 4.1 Member Registration

4.2A Top Up Credit Balance (Member)

4.2B Top Up Credit Balance (Non-Member)

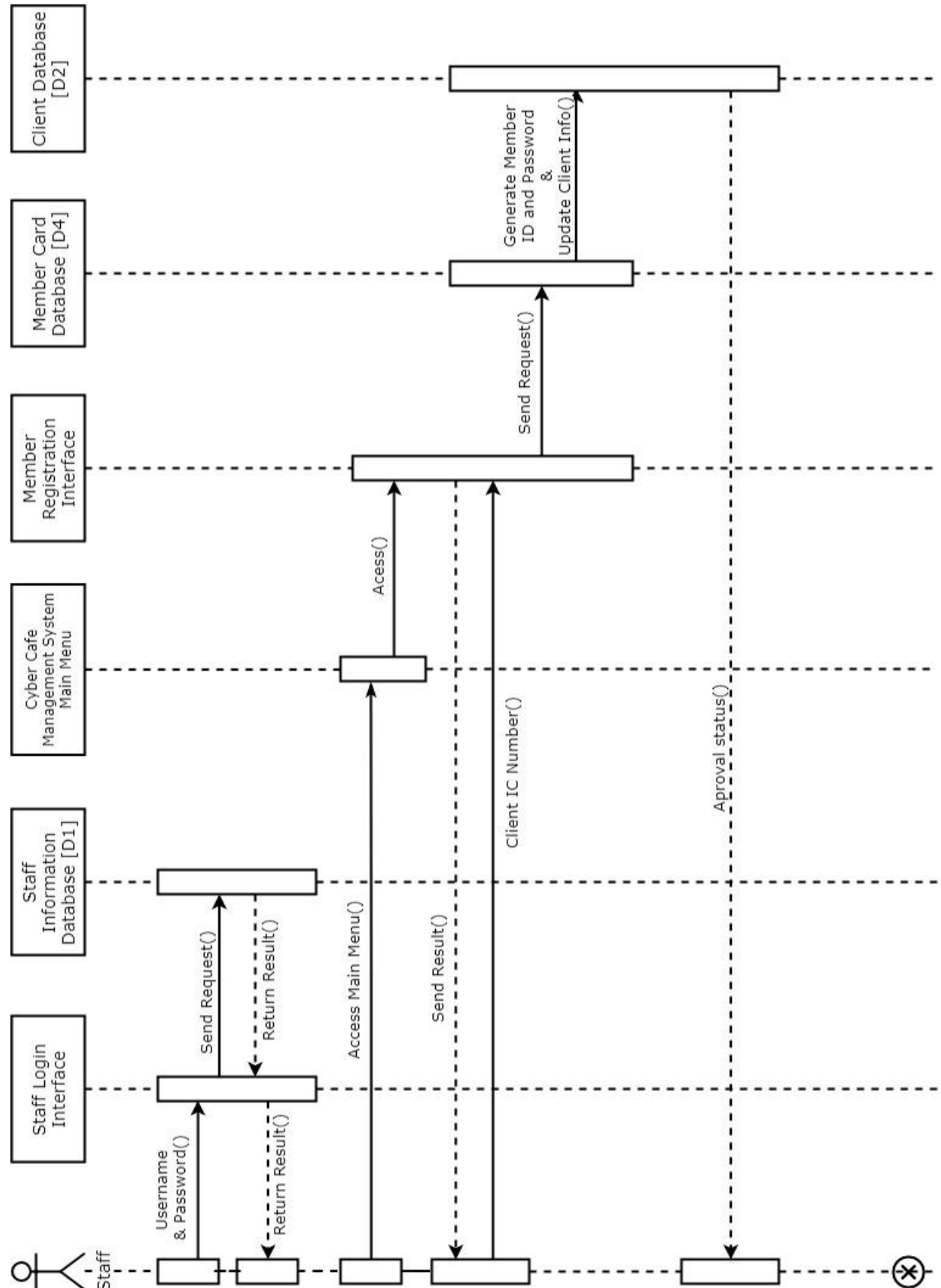**4.3A PC Activation (Member)**

4.3B PC Activation (Non Member)

5.0 CLASS DIAGRAM

Computer

+ computer_id
+ computer_type
+ computer_specs
+ computer_stats
+ computer_branch

+ get computer_id()
+ set computer_id()
+ set computer_type()
+ set branch_id()
+ update computerStats()
+ set computerSpecs()

Price

+ rate_type
+ rate_amount

+ get rate_type()
+ calc price()
+ set price()

Roles

+ role_type
+ permissions

+ get role_type ()
+ set permission()
+ update permission()

Transaction

+ transaction_id
+ member_id
+ staff_id
+ date_time
+ rate_type
+ price

+ get Member_id()
+ get Staff_id()
+ get Date_Time()
+ get price()
+ store reciept()

Member

+ member_id
- member_password
+ member_ic
+ member status
+ role_type

+ set member_id()
+ set member_password()
+ set member_ic
+ set member status()
+ set member role_type()

Branch

+ branch_id
+ branch_address
+ branch_phone
+ computer_id

+ get branch_id()
+ get computer_id()
+ set branch_id()
+ set computer_id()

Staffs

+ staff_id
- staff_password
+ staff_name
+ role_id
+ contact_number
+ email
+ rank
+ status
+ branch_id
+ role_type

+ get branch()
+ set staffID()

Generate Coupon

+ coupon_id
+ coupon_code
+ staff_id
+ amount
+ time_date
+ price
+ time
+ remarks
+ transaction_id

+ get price()
+ set transaction_id()
+ update log()

Activity Log

+ coupon_ID
+ value
+ time_date
+ status

+ set activity_log()
+ get price()
+ calc value()
+ set value()
+ update status()

14

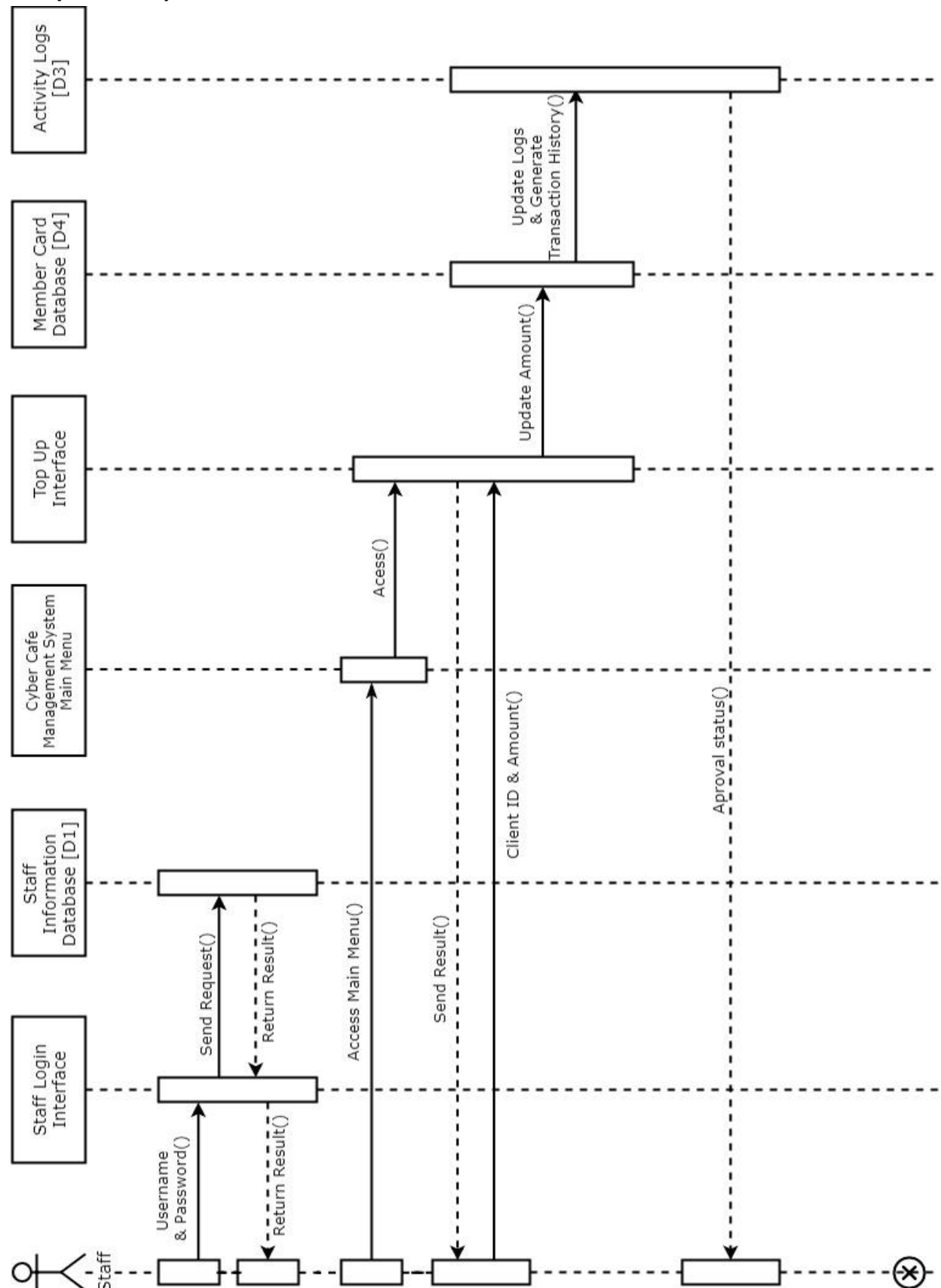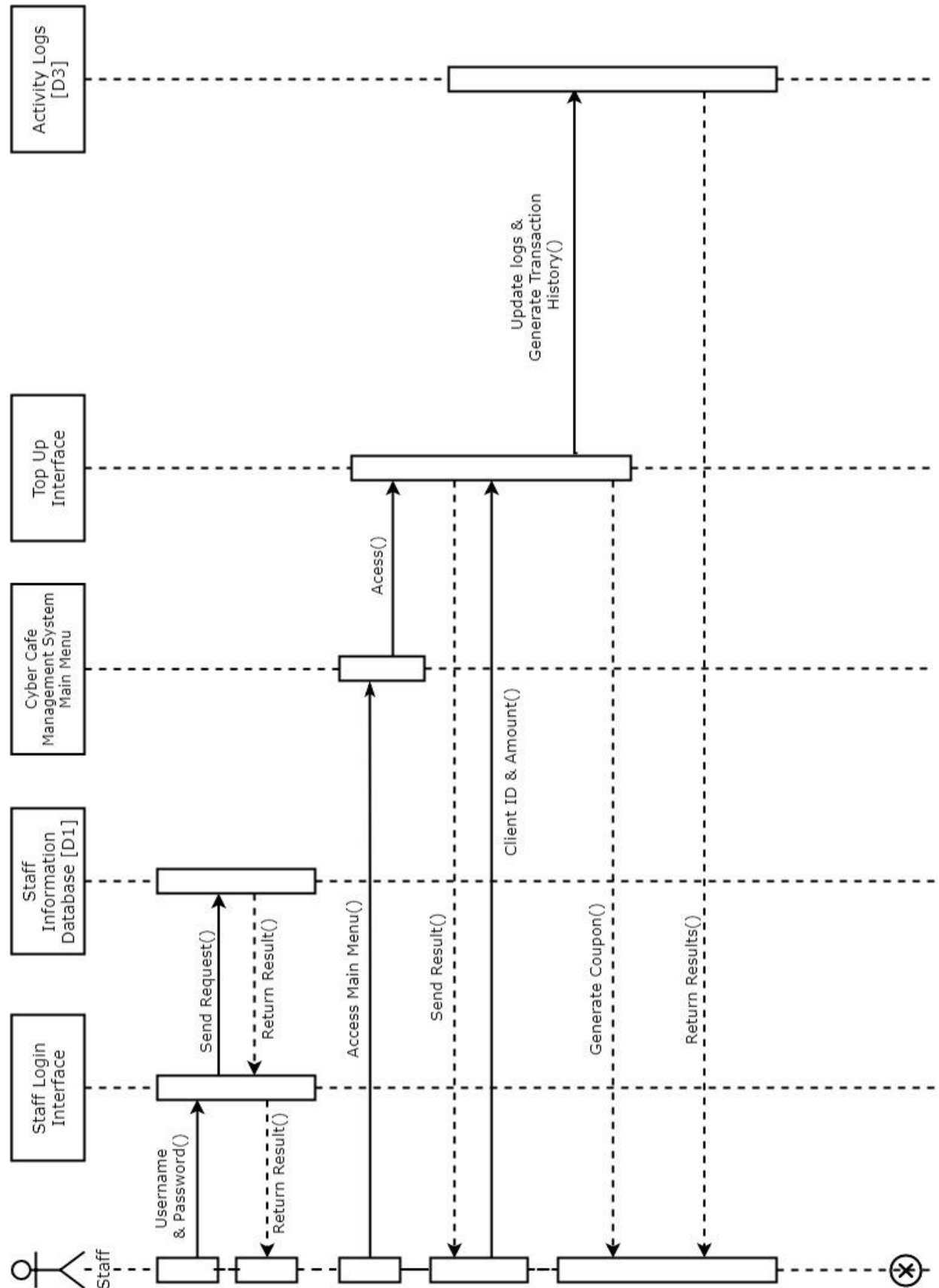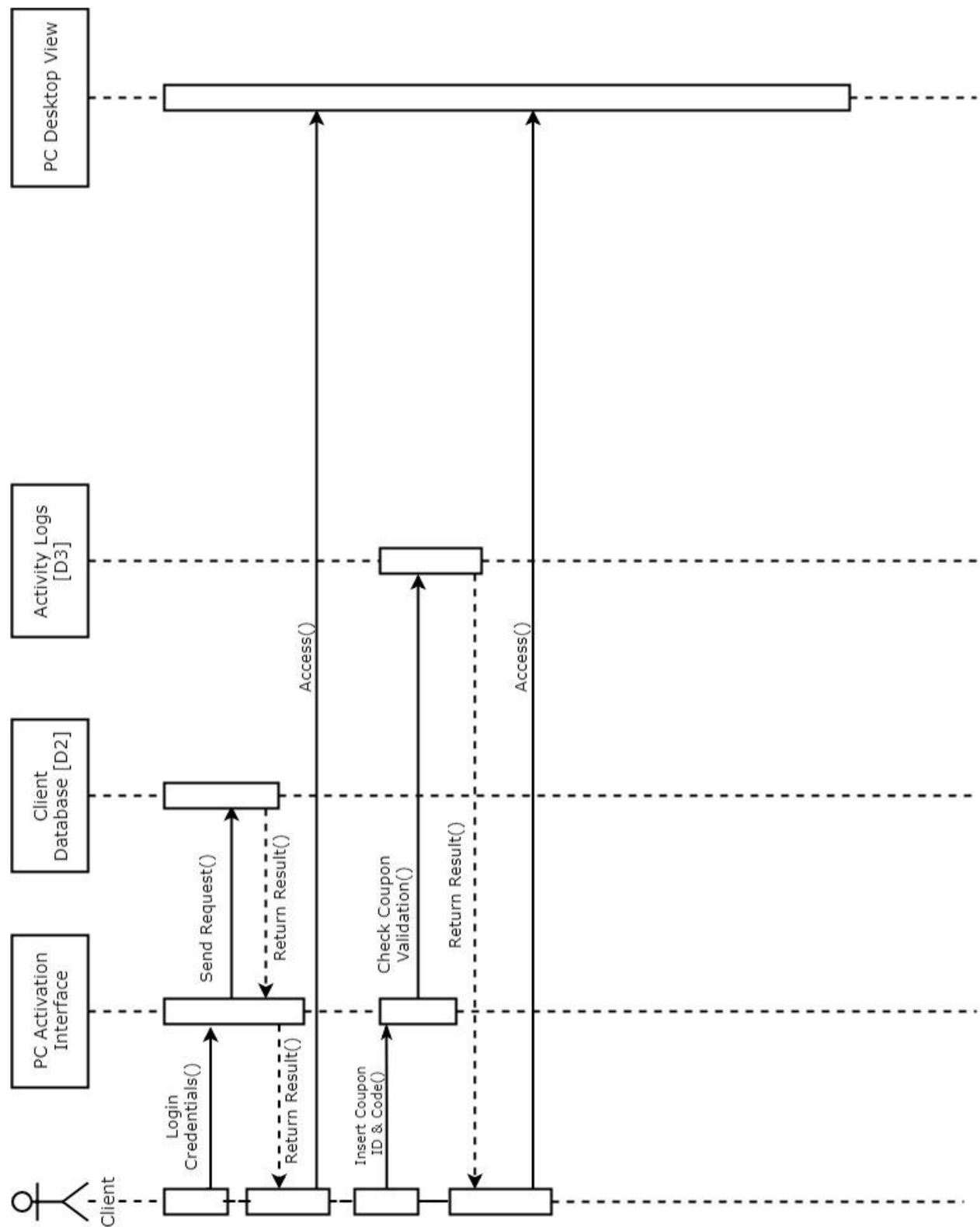# 6.0 SEQUENCE DIAGRAM

6.1 Member Registration

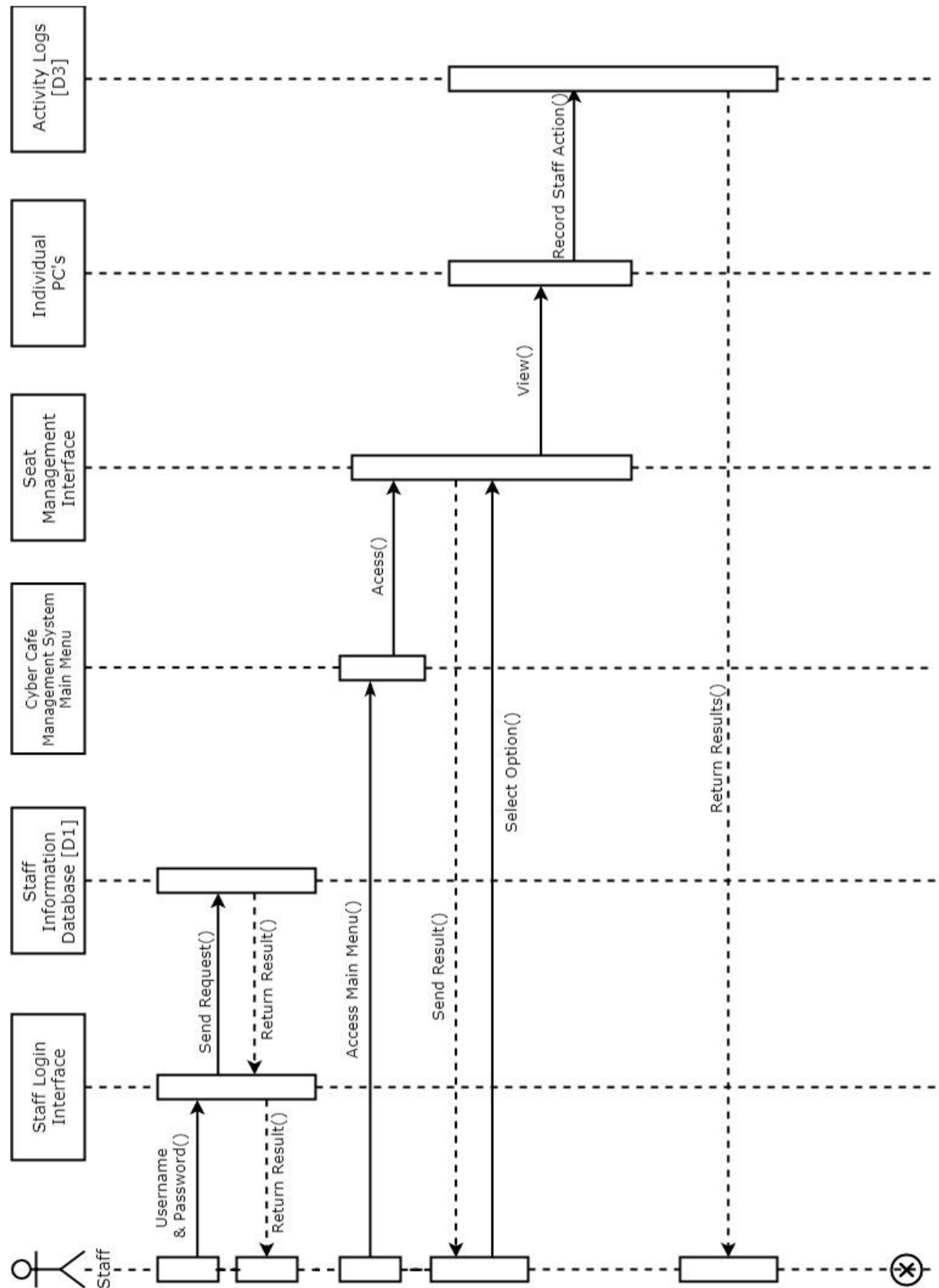## 6.2 Top Up Credit Balance (Member)
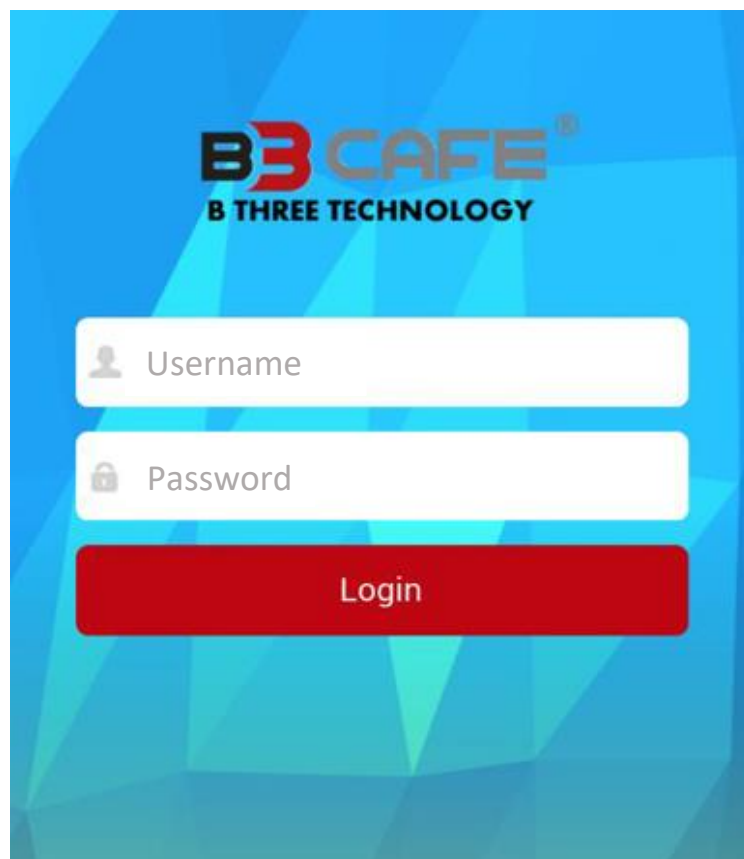
(Non-Member)
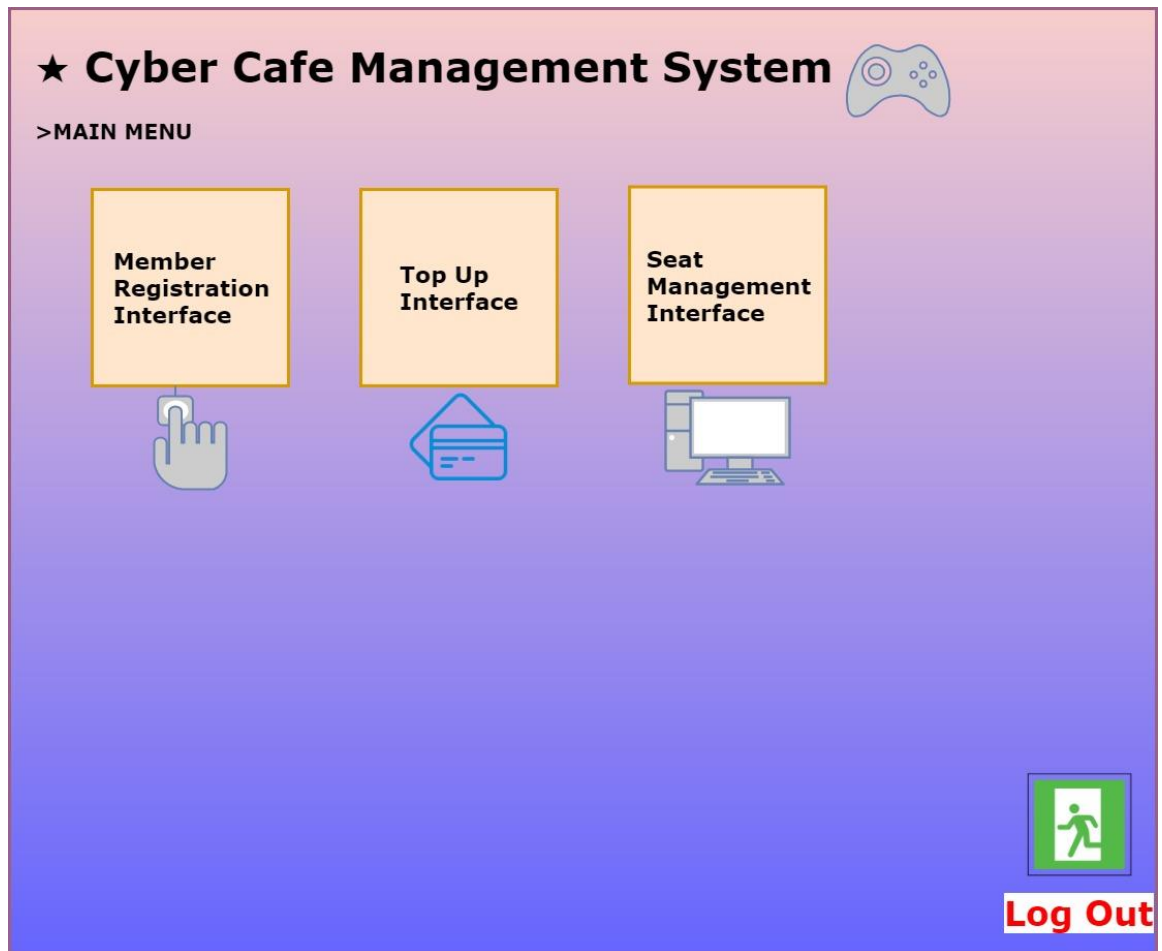
6.3 Activate PC

6.4 Seat Management

7.0 DRAFT USER INTERFACE

▲ *Image 1.1 PC Activation user interface for clients.*

▲ *Image 1.2 Staff login user interface.*

▲ *Image 1.3 Cyber Café Management System main menu user interface.*

▲ *Image 1.4 User interface for registering new member.*

▲ *Image 1.5 User interface for top-up (member) and generate coupon (non-member).*

★ Cyber Café Management System				Seat Management				
A1	A2	A3	A4	A5	A6		**Color**	**Status**
B1	B2	B3	B4	B5	B6			Taken
C1	C2	C3	C4	C5	C6			Free
D1	D2	D3	D4	D5	D6			Reserved
E1	E2	E3	E4	E5	E6			Selected
F1	F2	F3	F4	F5	F6			
G1	G2	G3	G4	G5	G6		> Command:	
H1	H2	H3	H4	H5	H6		> <init>	
EP1	EP2	EP3	EP4	EP5	EP6		Action:	
EP7	EP8	EP9	EP10	EP11	EP12		Force ON	Force OFF
							Convert	View
VIP ROOM 1								
VA1	VA2	VA3	VA4	VA5	VA6			
VIP ROOM 2								
VB1	VB2	VB3	VB4	VB5	VB6			

▲ *Image 1.6 Seat Management Interface.*

8.0 CONCLUSION

In conclusion, there are more and more systems occurred in our society day by day, with the increase demand for faster and effective service speeds with low cost, as well as the increase popularity and quality of the internet and technology. Developing effective systems are crucial of meeting today's market demands. Even in cyber cafes, management system such as this are helping the company to save money by lowering workforce and storage cost as well as providing faster and smoother service standards to boost the business. It also helps the staffs to simplify things since most of the work are automated. Finally, we would also like to appreciate the help from 818 cyber café officials for letting us interview them, and friends for helping providing guides for us in order to achieve this project.