Team name: **Peace**

Team leader's Name: **Sadman Sakib**

Team members' Names: **Sadman Sakib**

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                           Mehzabin Haque

Slack channel link/ID: **_h03_peace**

Problem Identification:

The problem of this project is to find out a health monitoring tool which can generate emergency notification from medical sensors. Here we will use synthetic data instead of medical sensors.

Risk Analysis:

1. The emergency notification will be given on synthetic data which cannot be 100 percent accurate.
2. The sensors are costly,
3. The output differs for different age and physical conditions

Idea Formulation and Implementation Plan:

We will try to make a web application which will generate emergency notification and will work on maintaining users disciplined lifestyle. We will try to implement it using PHP, ANGULAR and DOTNET.

Elaborate Story

During a pandemic, the most challenging task is to monitor the health condition of a patient on-site by health workers.

How can we ensure proper monitoring of patients through technology here?

In such a case, introducing technology-based solutions will be very beneficial. For this hackathon, we can make a software process to generate dummy data which will behave like a sensor.

The sensors could be anything that takes data from the body. Sensors could detect a heartbeat, body temperature, Urine, blood pressure, body movement, and so on.

These data will be sent into a streaming platform such as Kafka /kinesis /Event Hubs or any other technology for real-time data transmission. From there, those data could be sent into a mobile app/web app/ desktop app. The doctors or nurses could use that app to drive valuable health-related information about the patient.

Users of This System

Primary User:

1. Patients
2. Doctors
3. Nurses

Secondary User:

1. Kafka

Features of Our System:

1. Emergency Notification
2. Feedback
3. User Registration
4. Log in
5. Report Generator
6. Emergency Ambulance
7. Psychological help
8. Prescription Analysis
9. Emergency Button
10. Medication Alarm

Emergency Notification:

When the heartbeat, blood pressure, temperature or locomotion cross the threshold value, an emergency notification will be sent to the doctor through his mobile phone. The doctor will observe the condition of the patient immediately and give feedback about the notification.

Feedback:

After getting notification from the system the doctor will check the patient. Then he/she can give feedback about the notification. By this, we can calculate the efficiency of this system.

User Registration:

There will be two types of users. Patients and Doctor/ Psychotherapist

A user has to register for using this application. He/ she has to provide username, email address, phone number, age, sex and prior medical information for registration. The information will be stored in the system database.

A **Doctor/ Psychotherapist** has to provide username, email address, phone number, age, sex

And his copy of certificate

.

Log in:

A user can log in using phone number and password.

Report Generator:

A health report can be generated by the supervision of a doctor/ Psychotherapist.

Emergency Button:

There will be an emergency button in the system. If a user press this button, emergency notification will be sent nt.to doctor and an emergency ambulance will be sent.

Psychological Corner:

This part of the system will contain information related to mental health. A user can get paid session from psychotherapist from this section. Normal psychological questions will also be asked to the patients.

Prescription assistant:

This section will help by storing previous prescriptions.

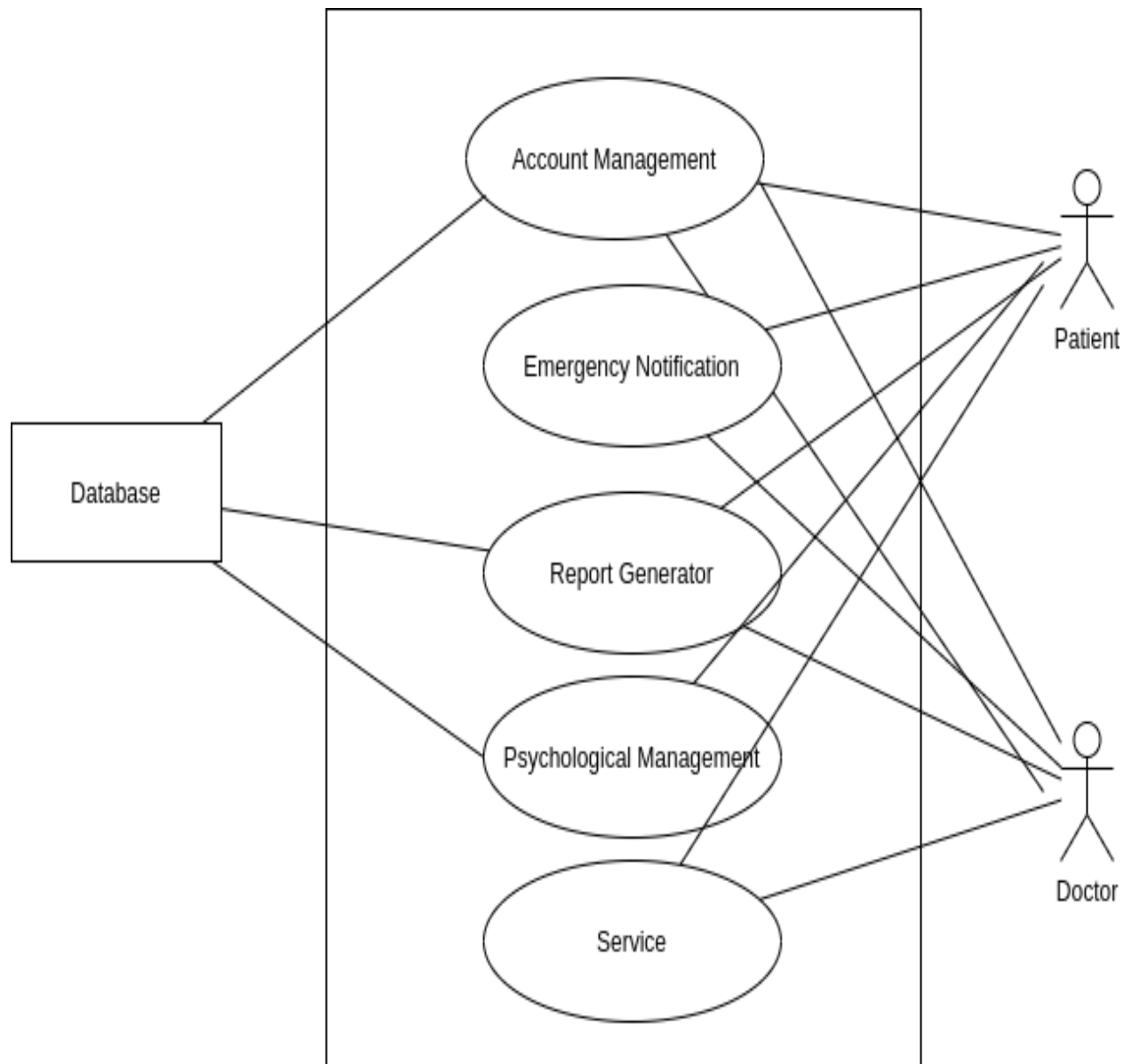If any medicine mismatch with other medicines, it will give notification to the doctor.

Medication Alarm:

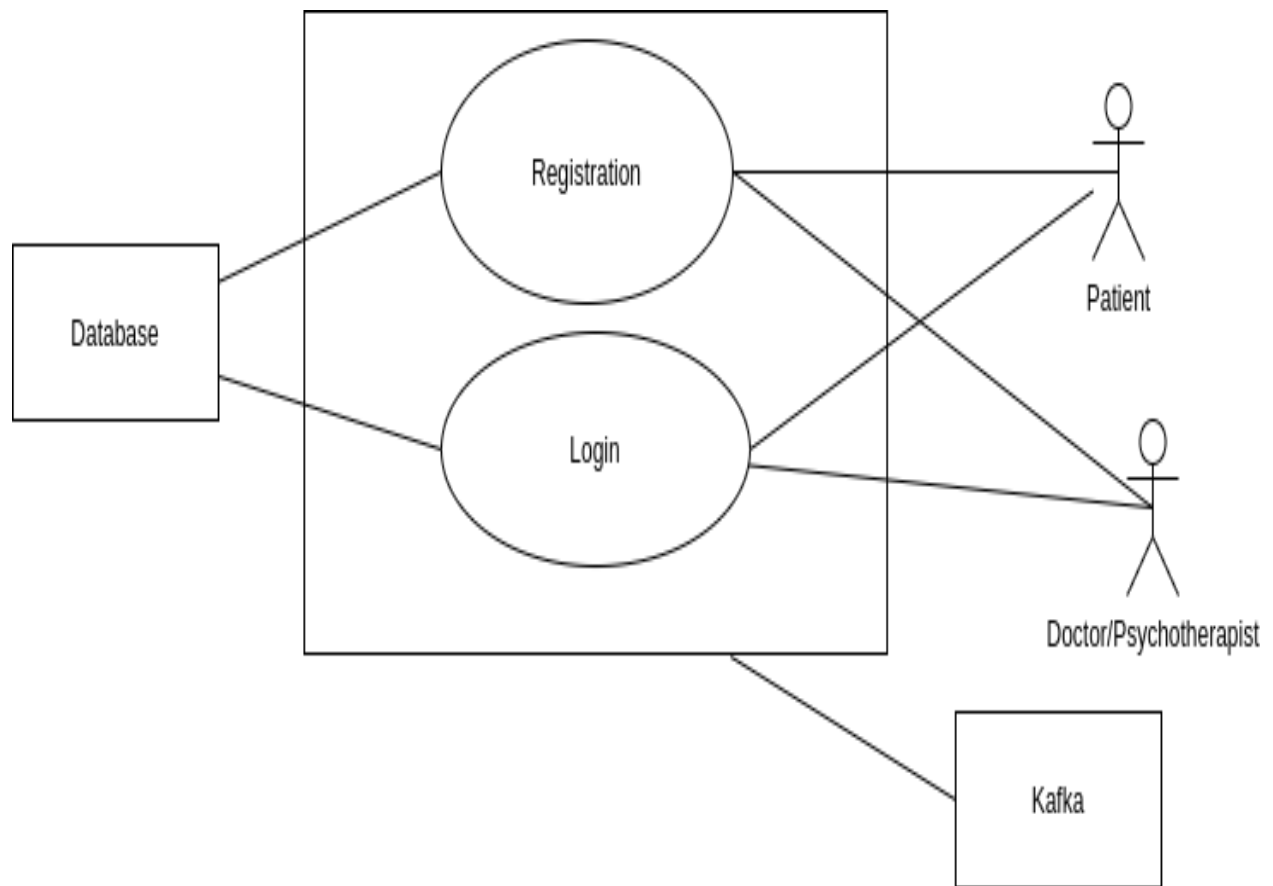It is an alarm which will help the user to take medicine and exercise in proper time.
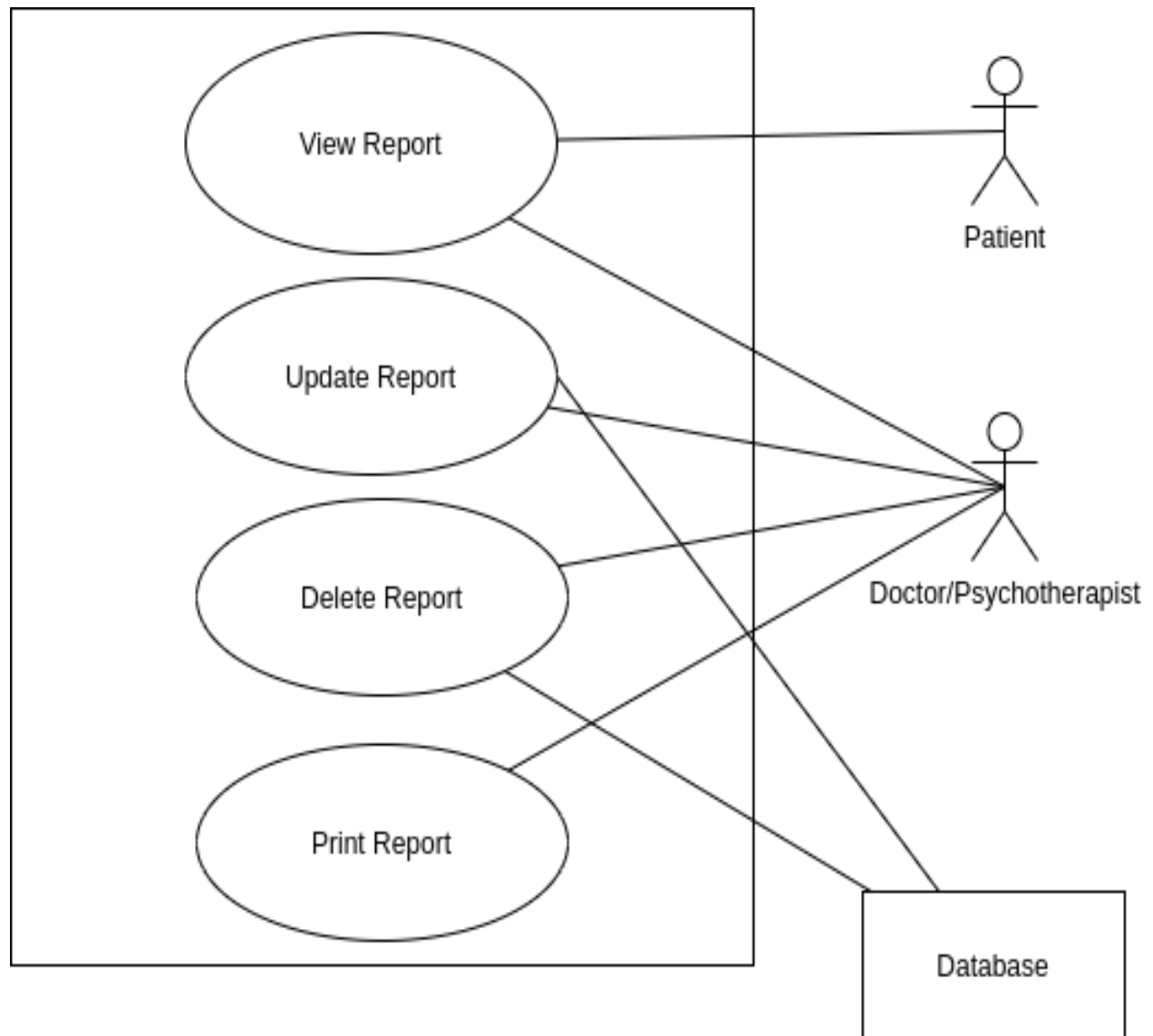
Usage Diagram:
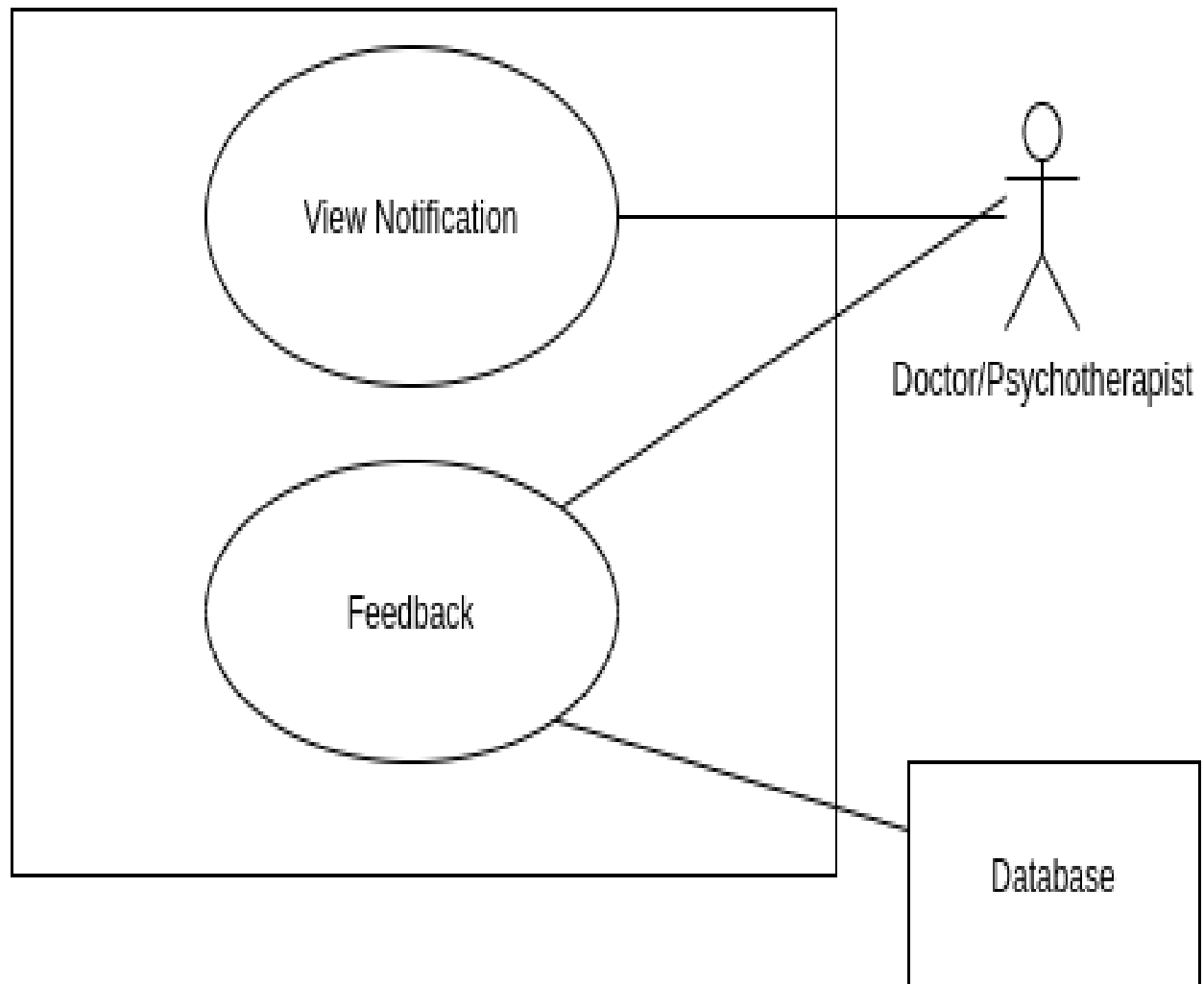

Psychotherapist — Health Monitoring System — Doctor — Patient — Database

Level 0

Account Management

Emergency Notification

Database

Report Generator

Psychological Management

Service

Patient

Doctor
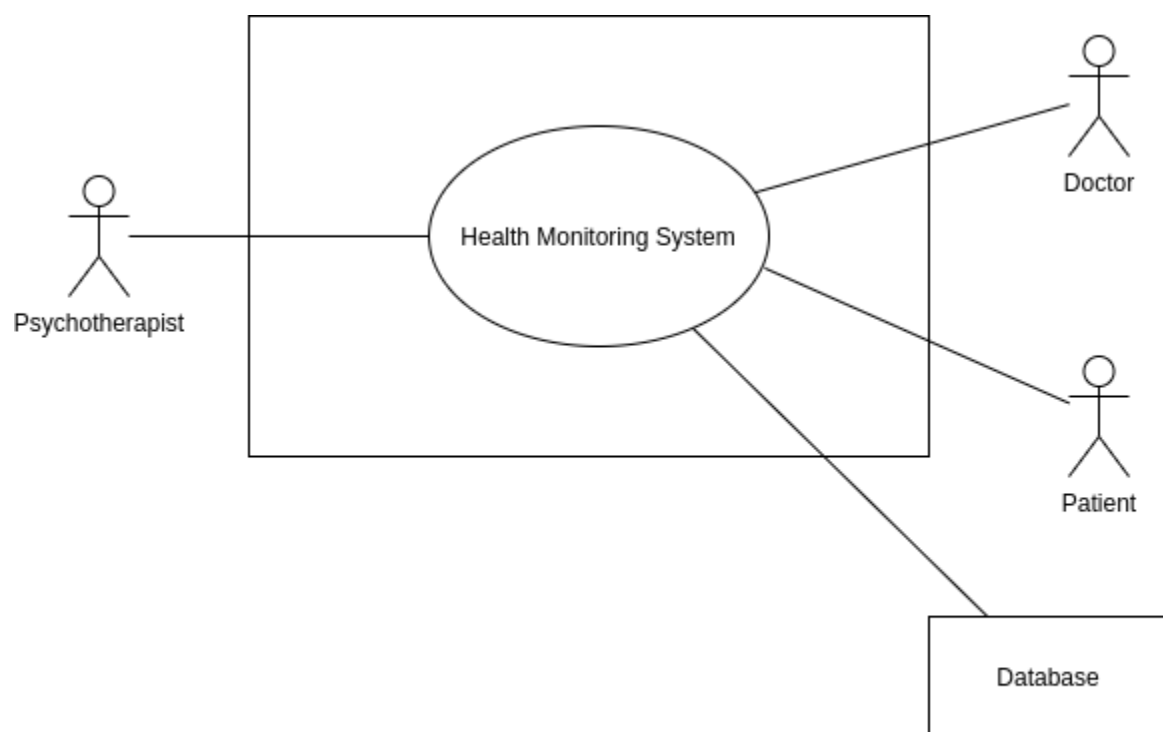
Level 1: Health Monitoring System

Level 1.1: Account Management System

Level 1.2: Emergency Notification

Level 1.2: Emergency Notification
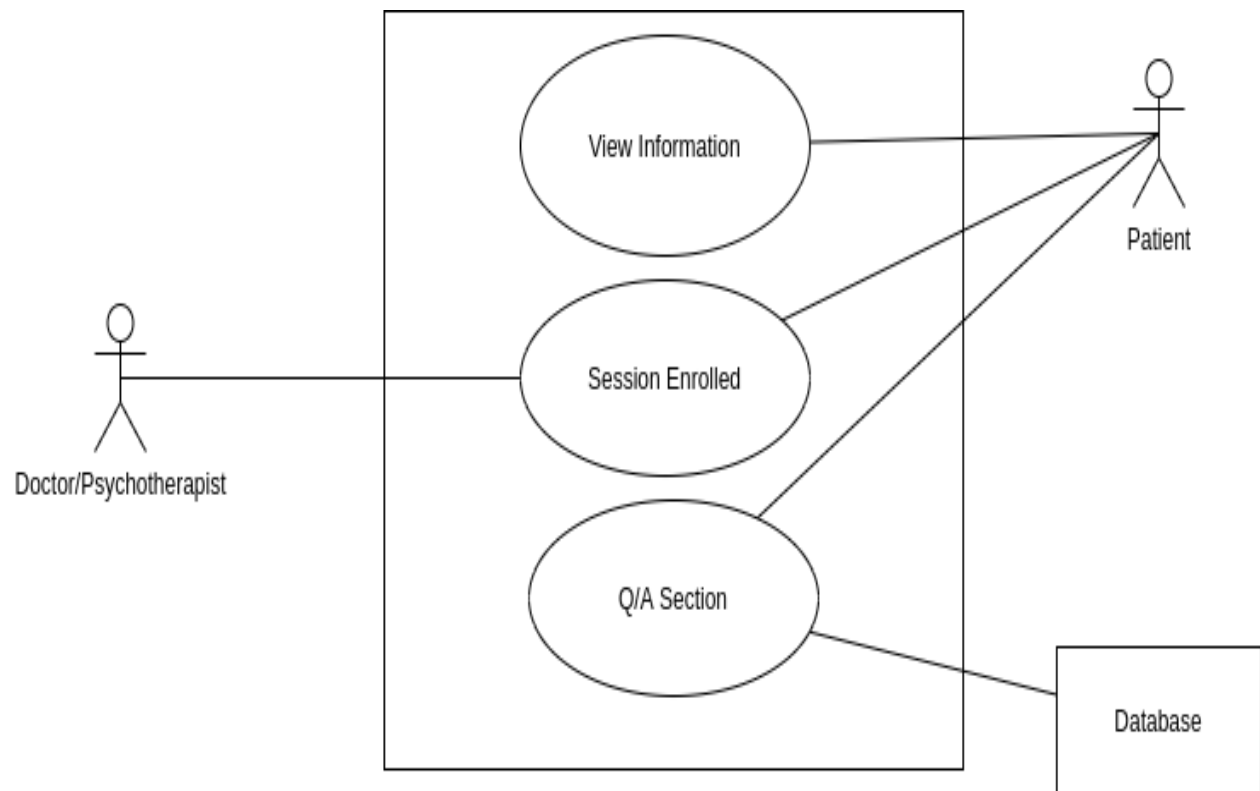
Level 1.4: Psychological Management
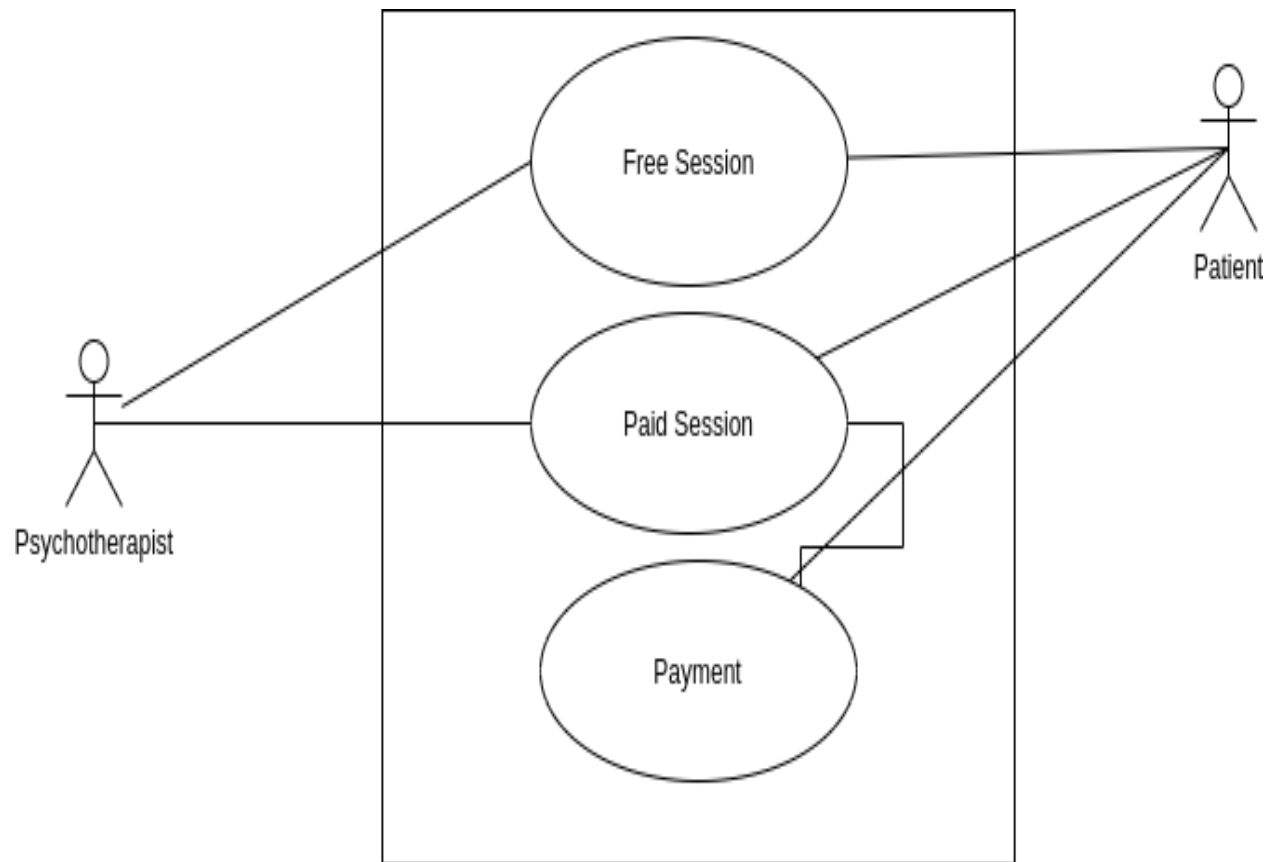
Level 1.4.1: Session Enrollment
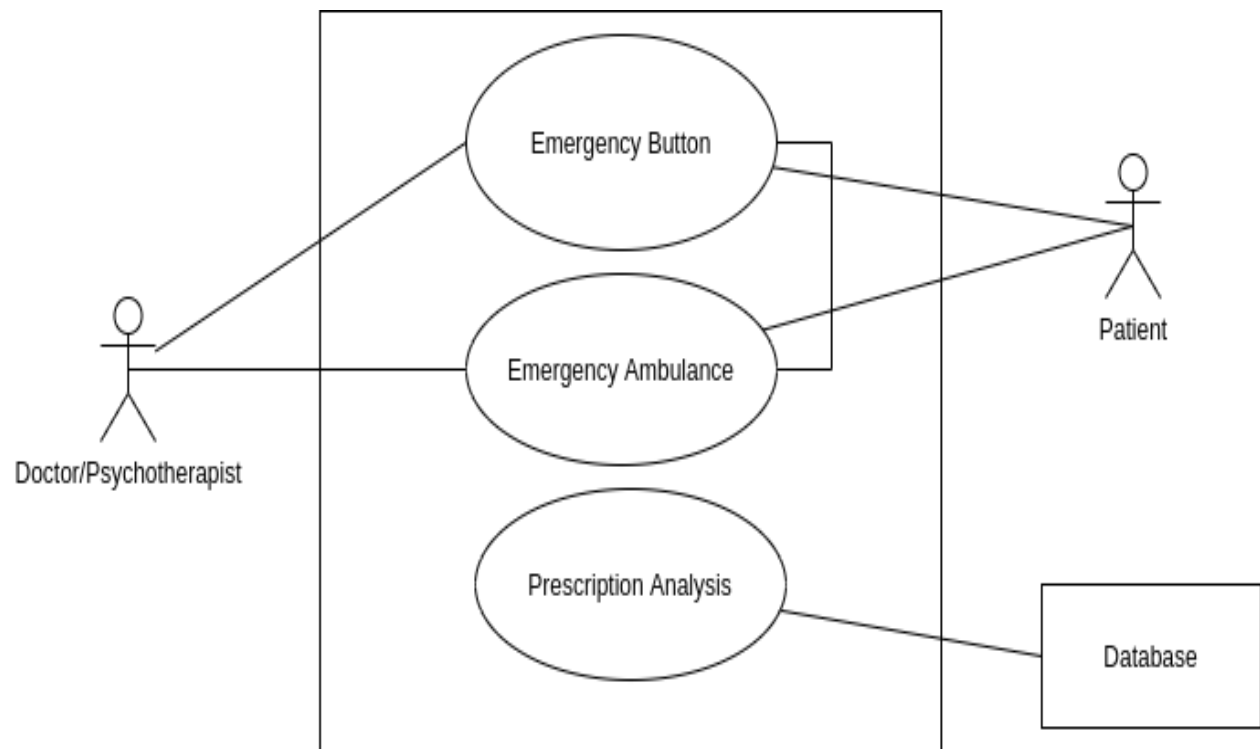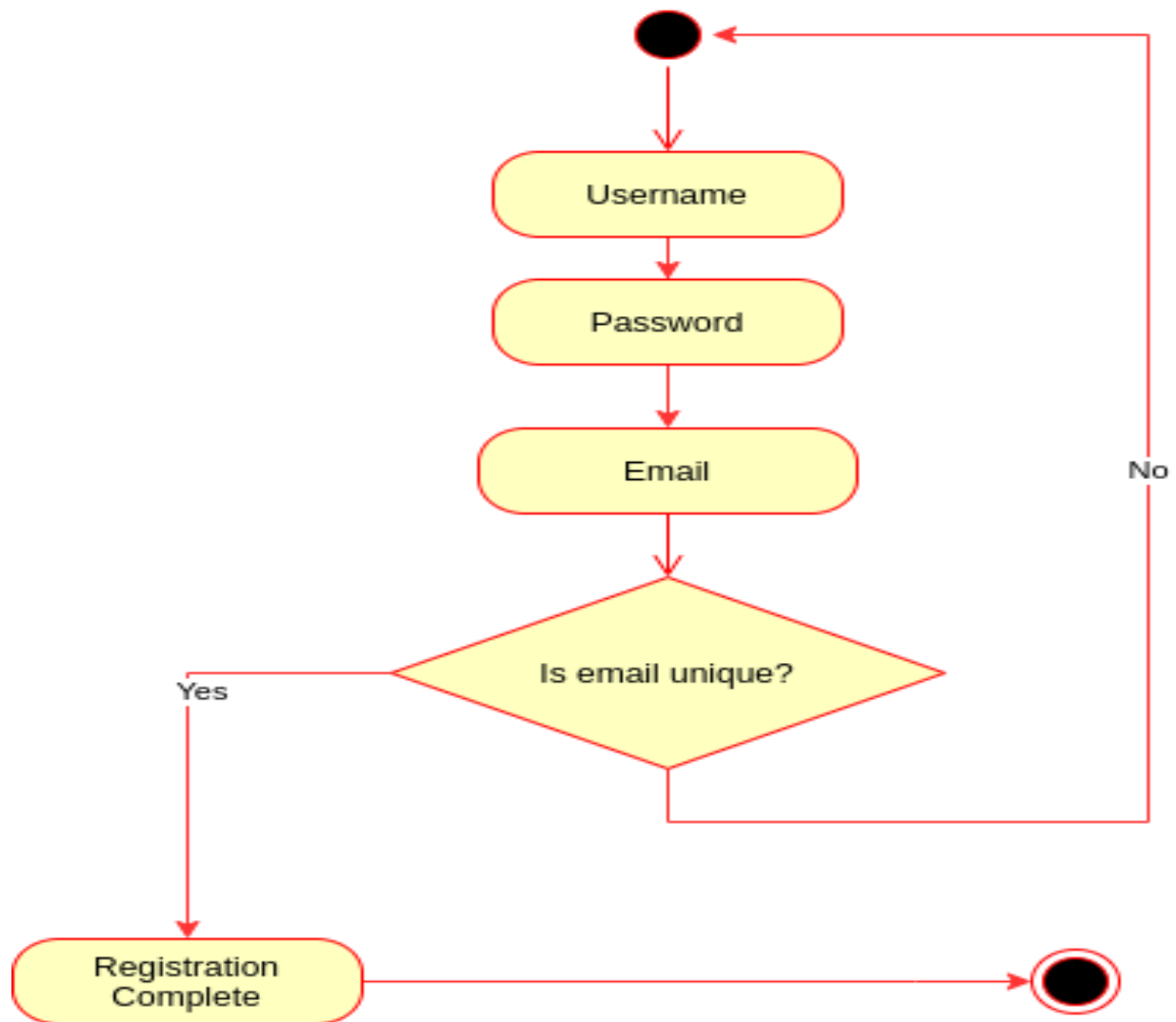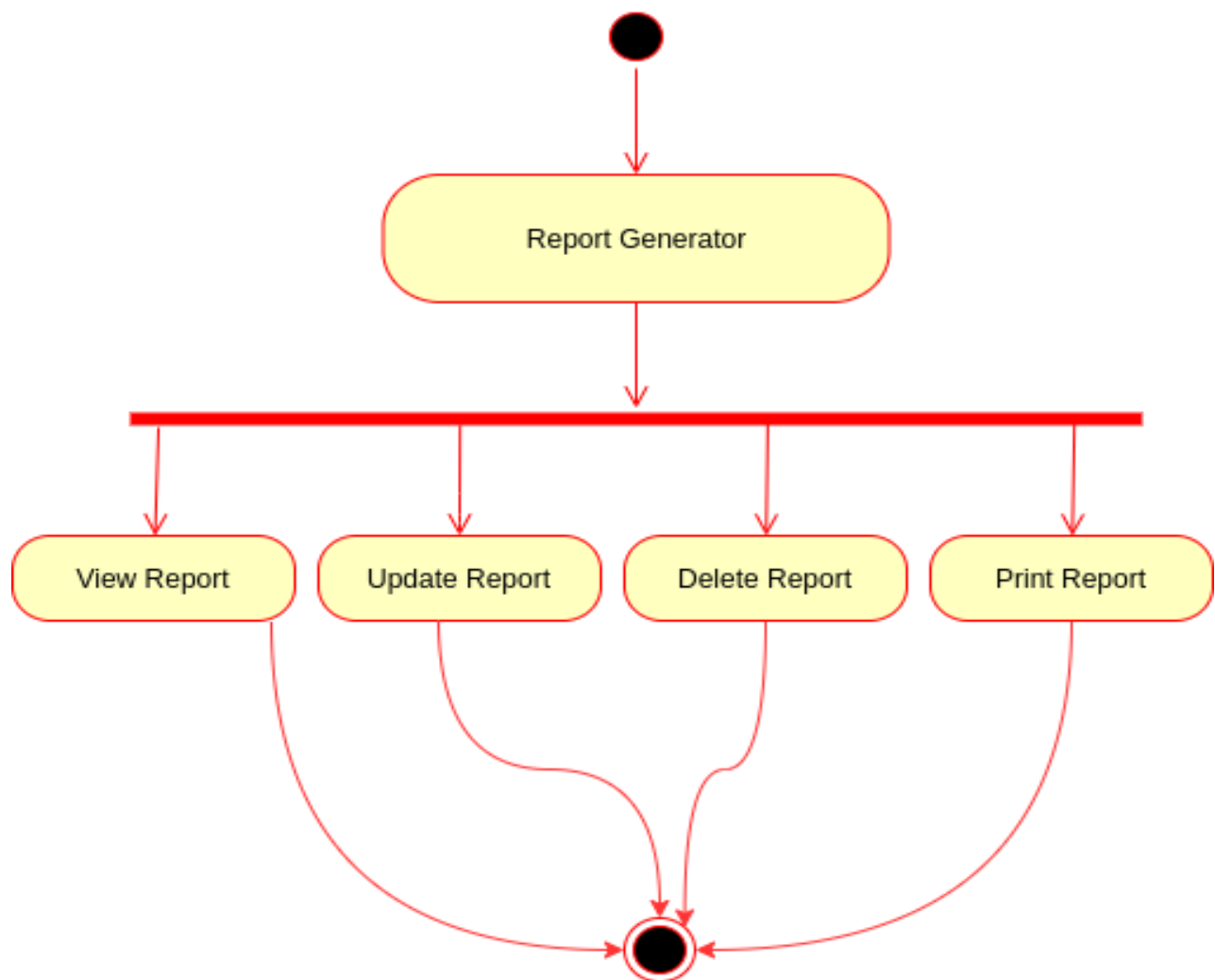
Level 1.5: Service
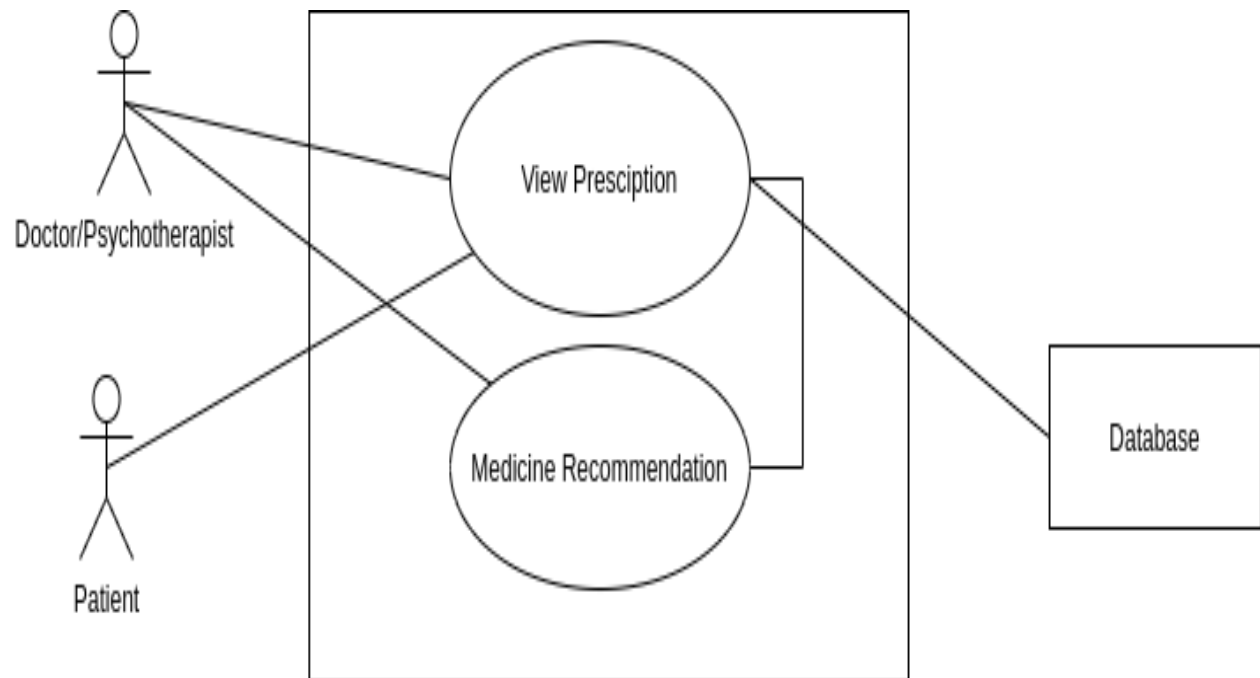
Level 1.5.3: Prescription Analysis

Activity Diagrams:
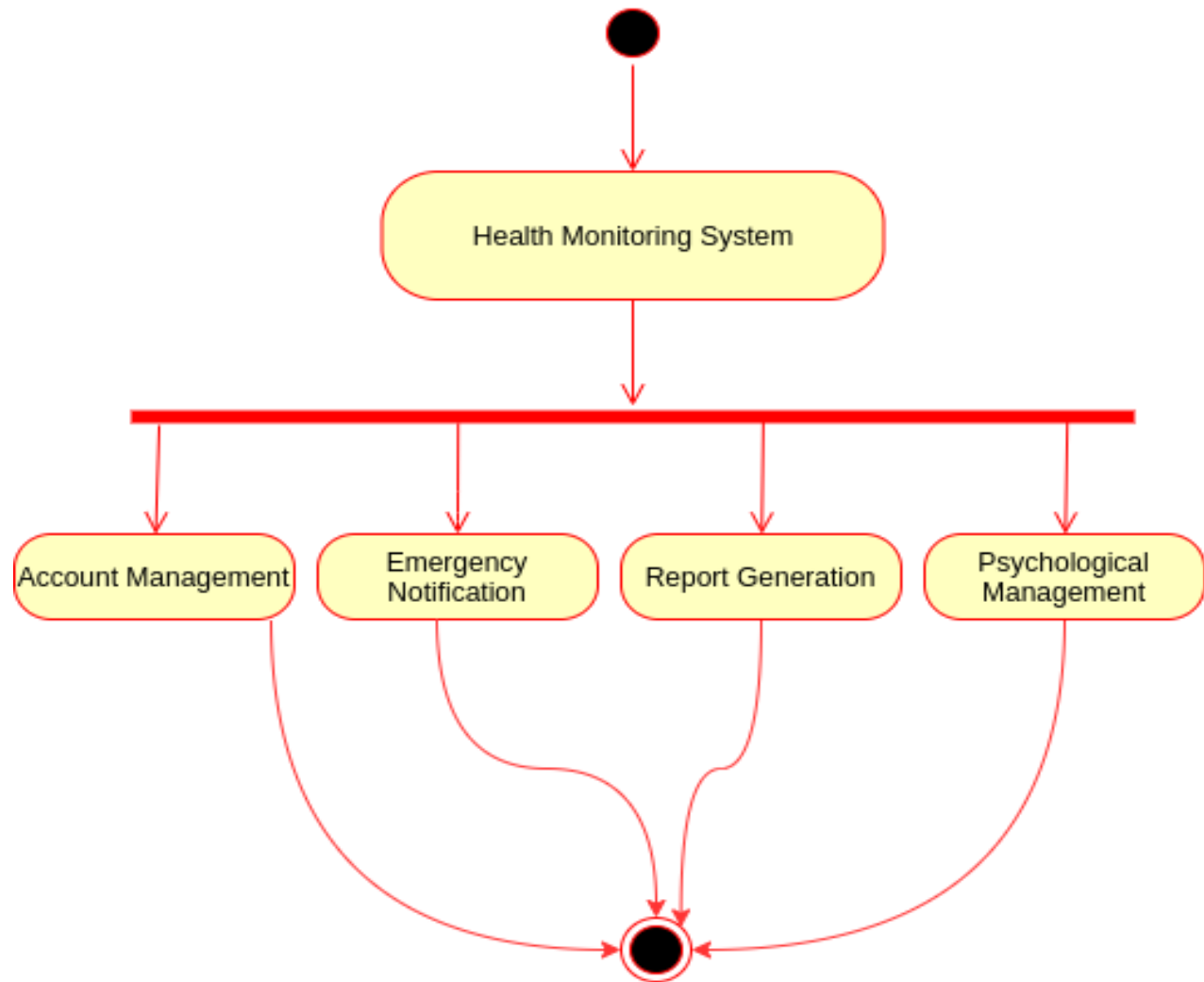
Activity Diagram: Level 1
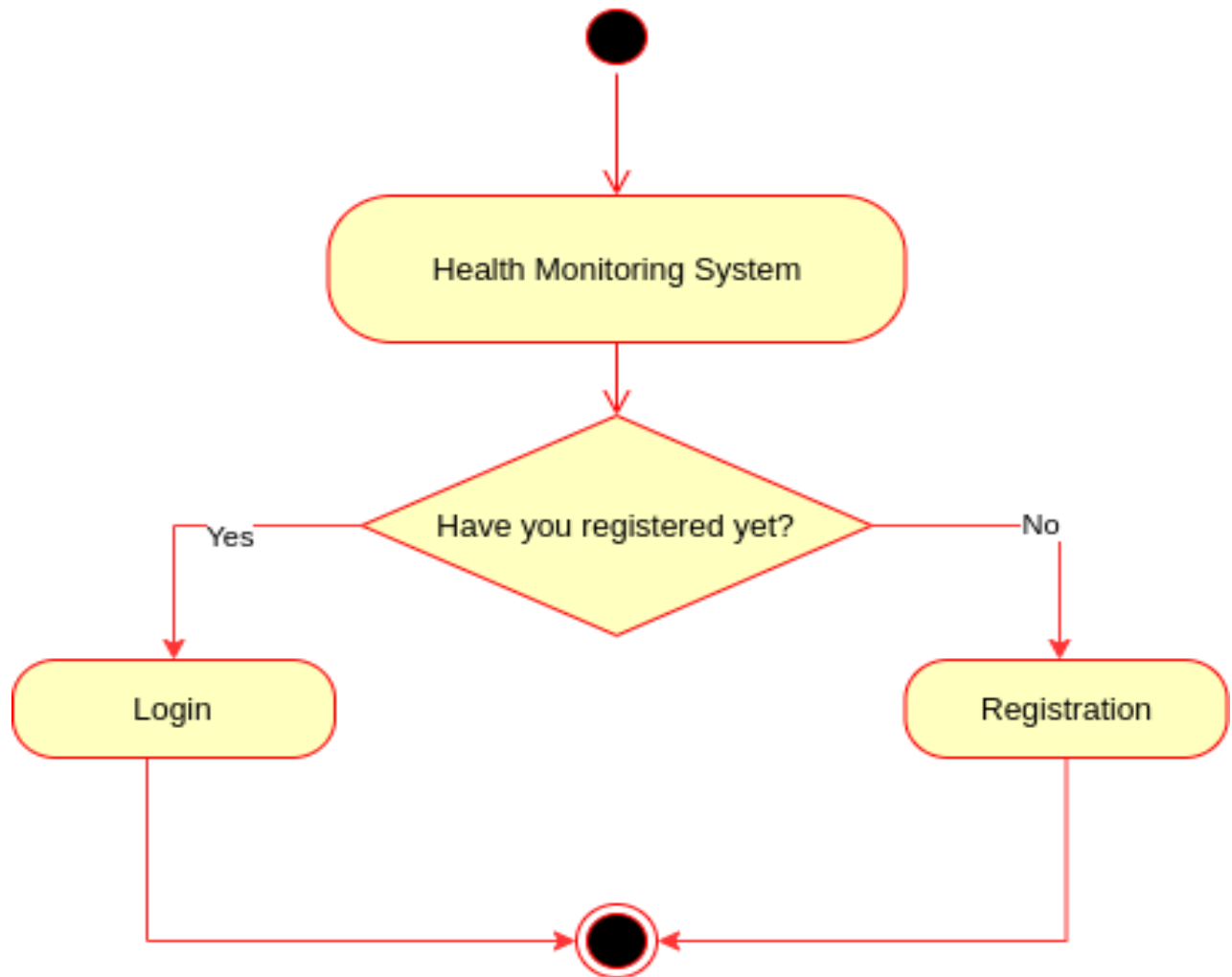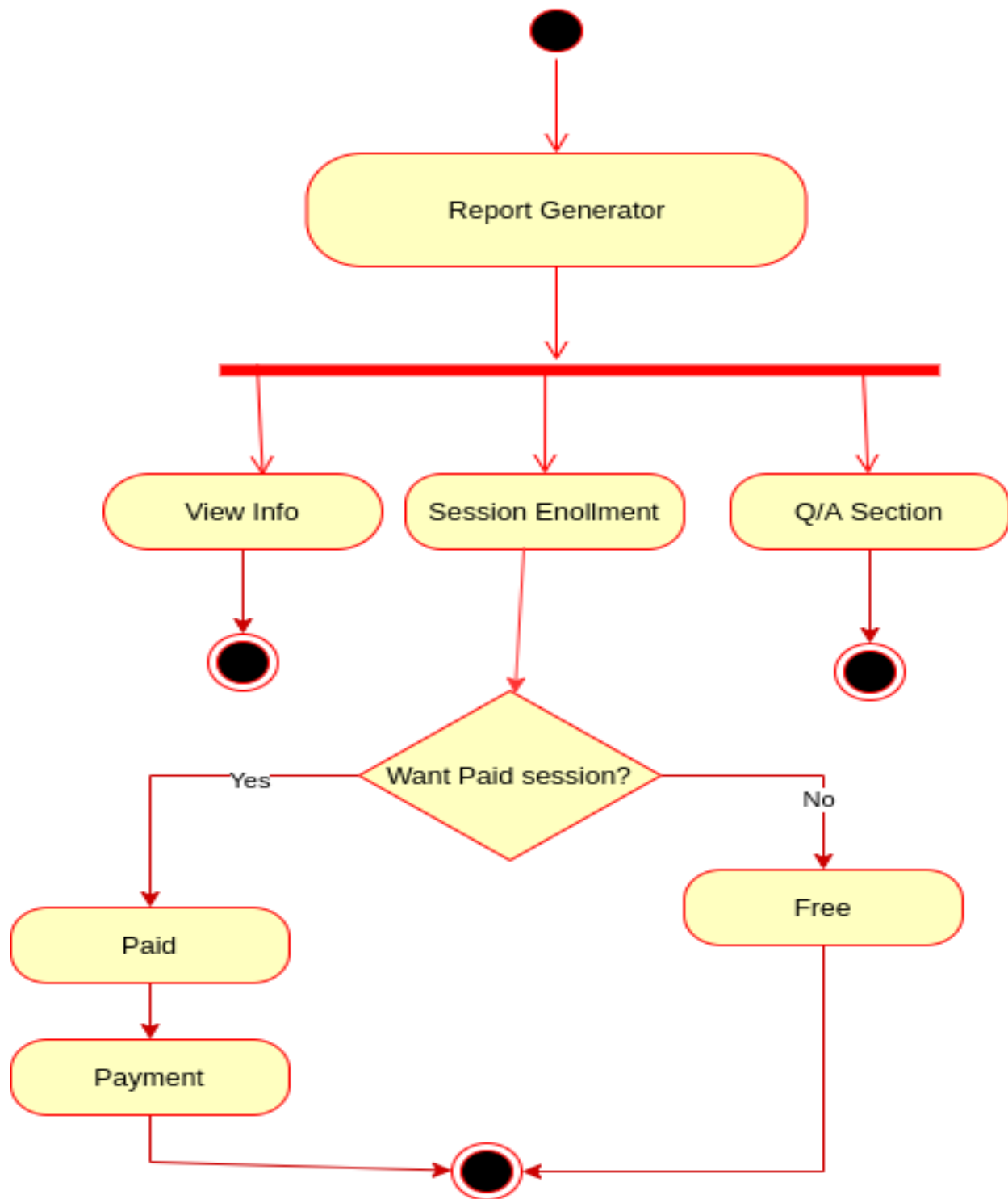
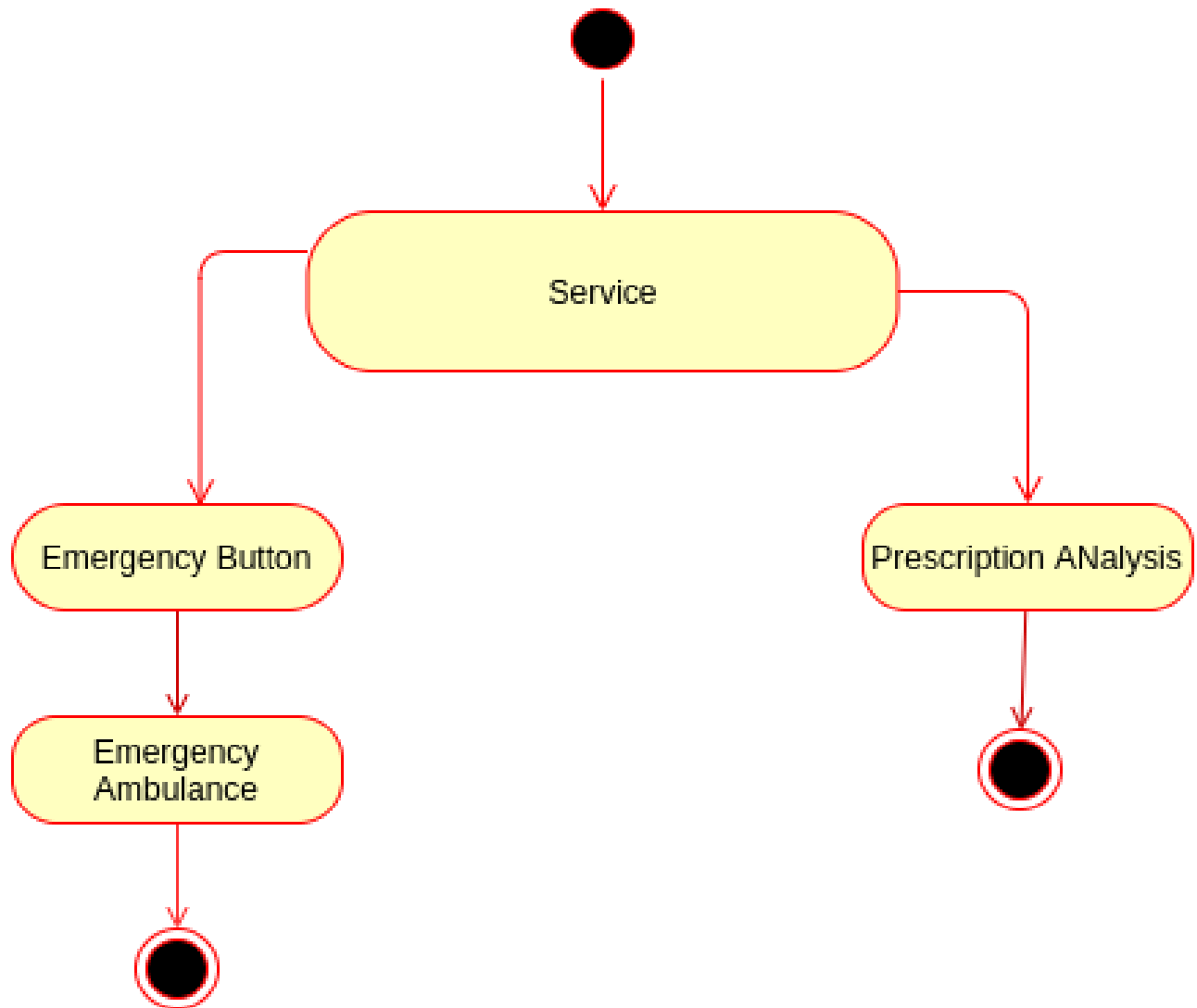Activity Diagram: Level 2

Activity Diagram: Level 2.1
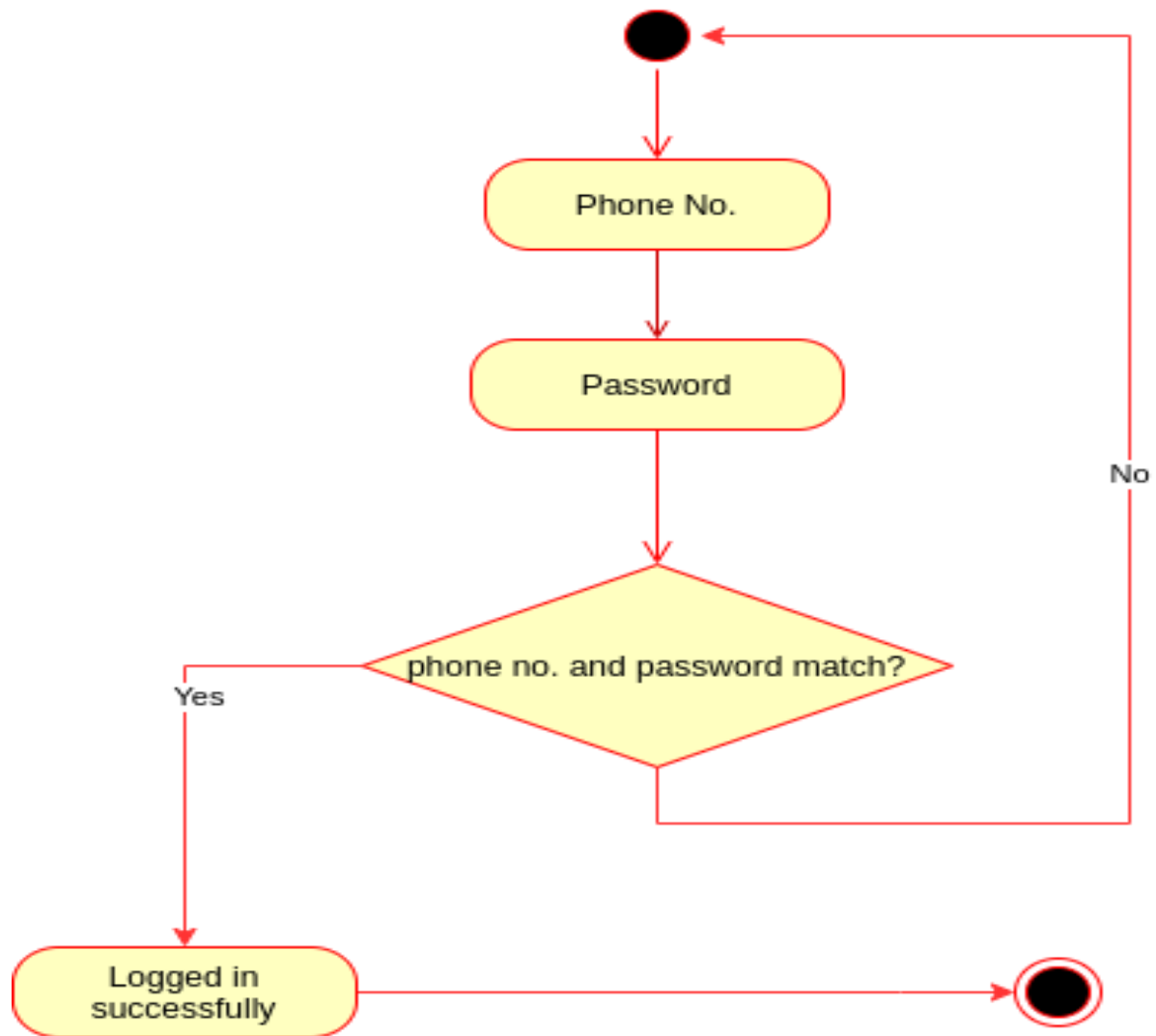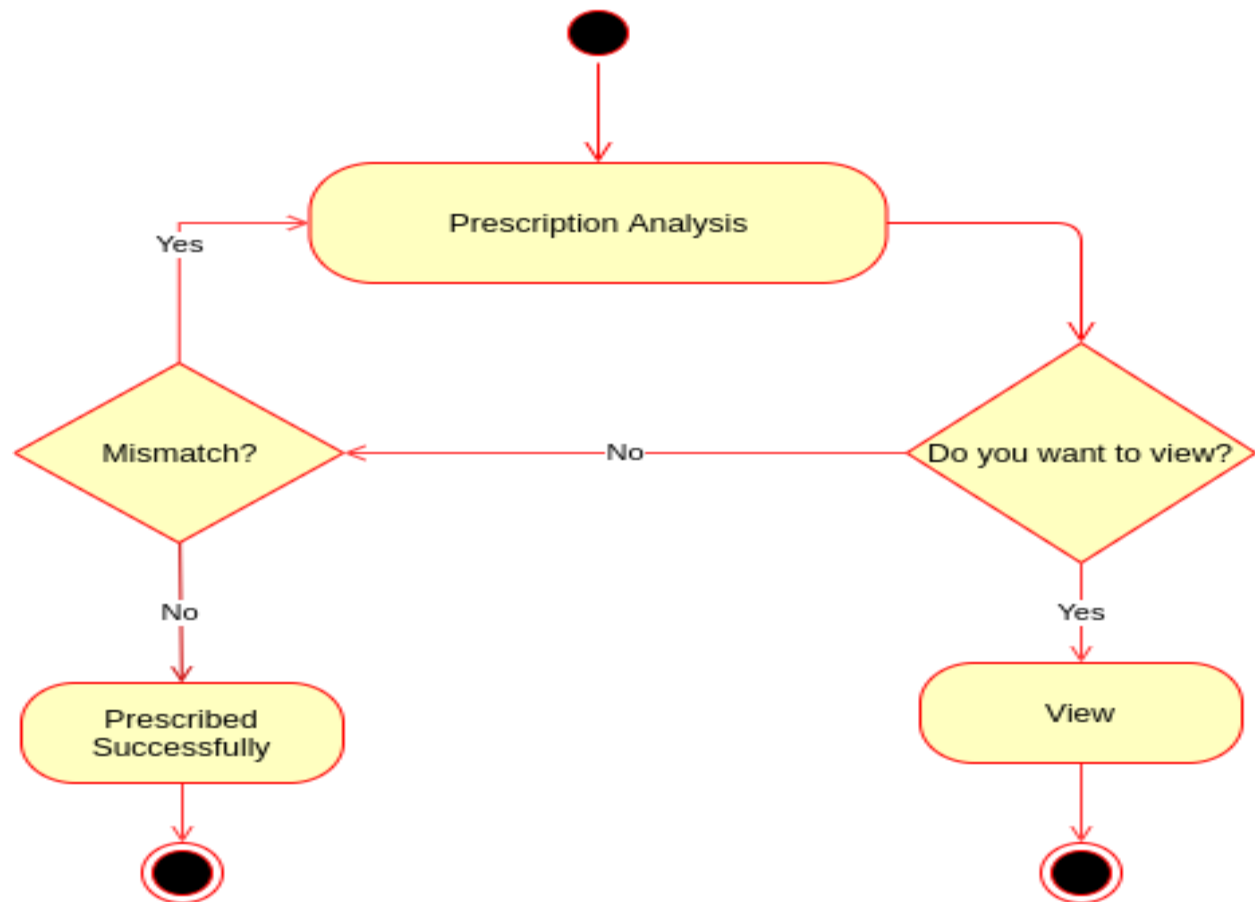
Activity Diagram: Level 2.1

Activity Diagram: Level 3

Activity Diagram: Level 3
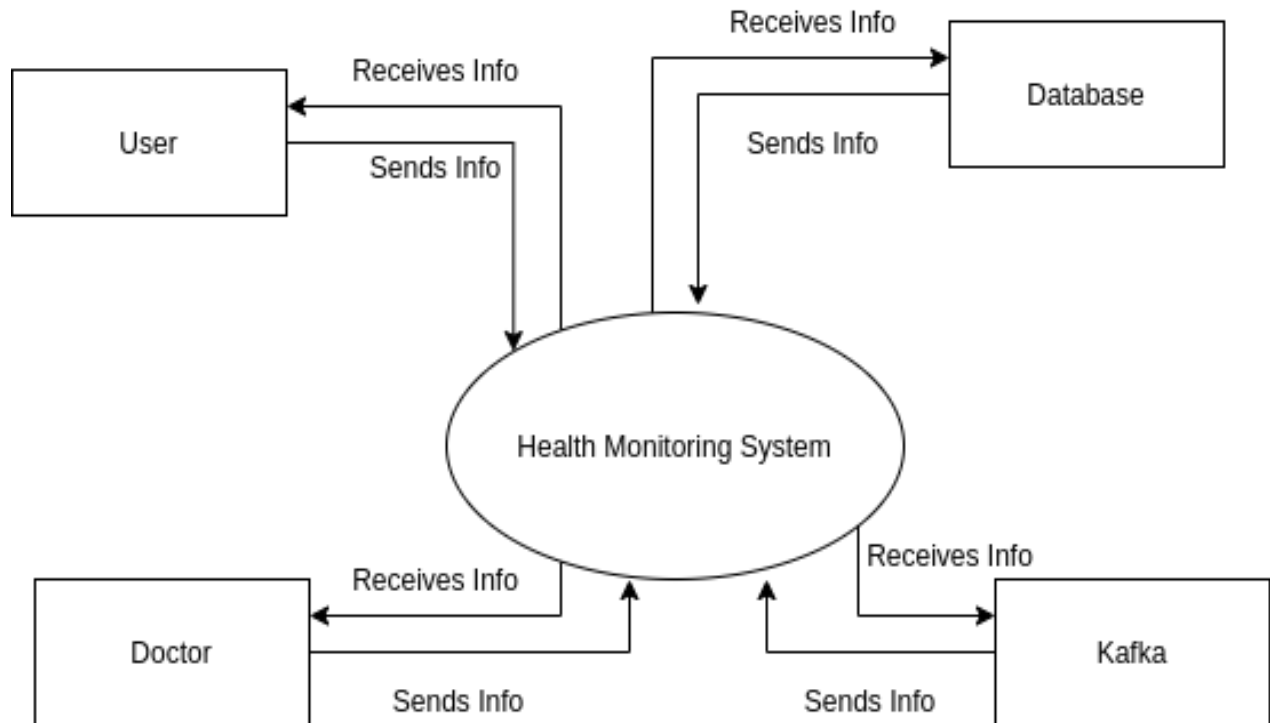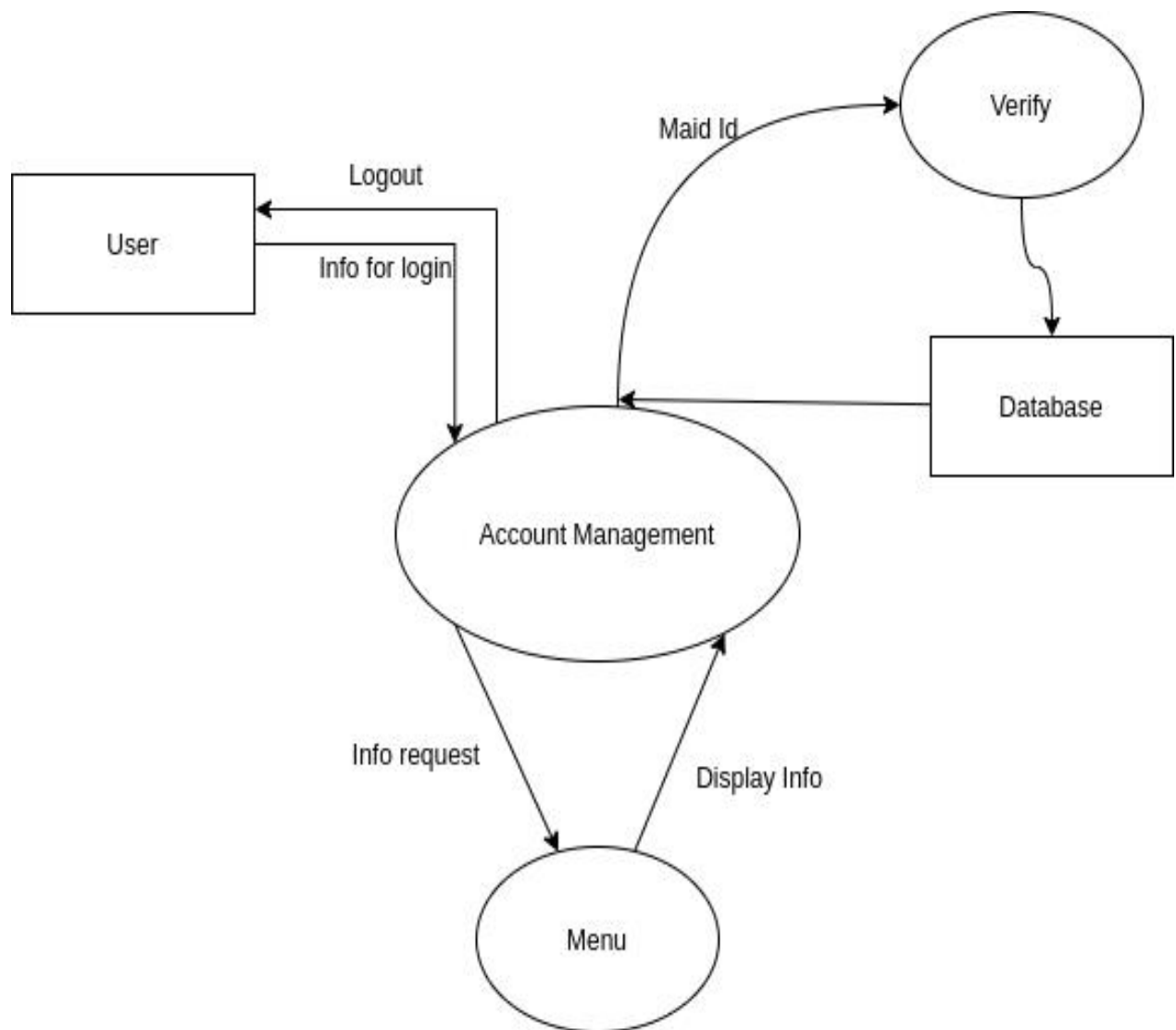
Activity Diagram: Level 1.5

Activity Diagram: Level 1.5

DFD (Data Flow Diagrams):

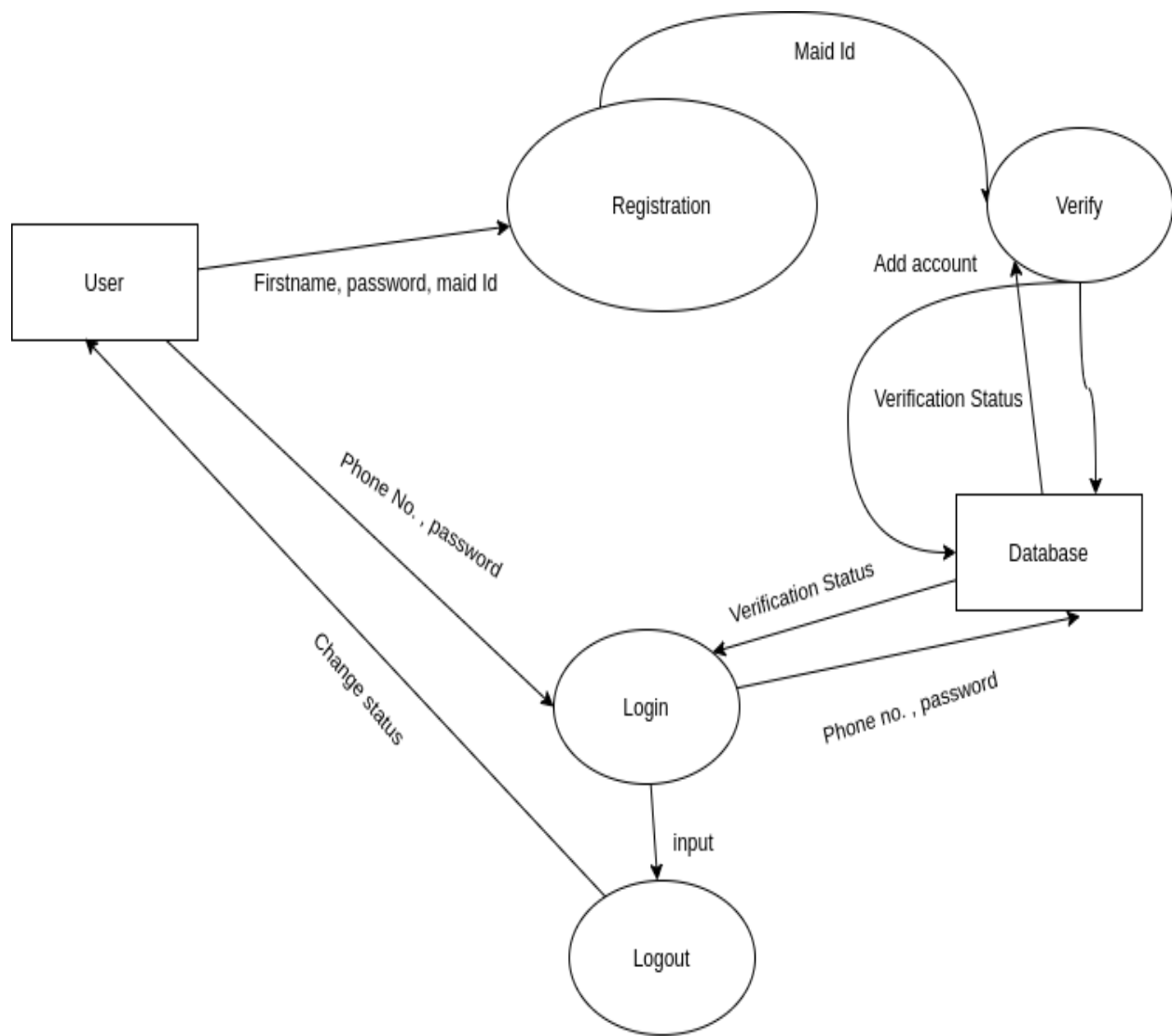Level0: dfd

Verify

User

Logout

Info for login

Maid Id

Database

Account Management

Info request

Display Info

Menu

Level2: dfd

Maid Id

Registration

Verify

User

Firstname, password, maid Id

Add account

Verification Status

Phone No. , password

Change status

Verification Status

Database

Login

Phone no. , password

input

Logout

Level2: dfd

Level 4: dfd

OUTPUT

User

Input

View into

Input

Psycological
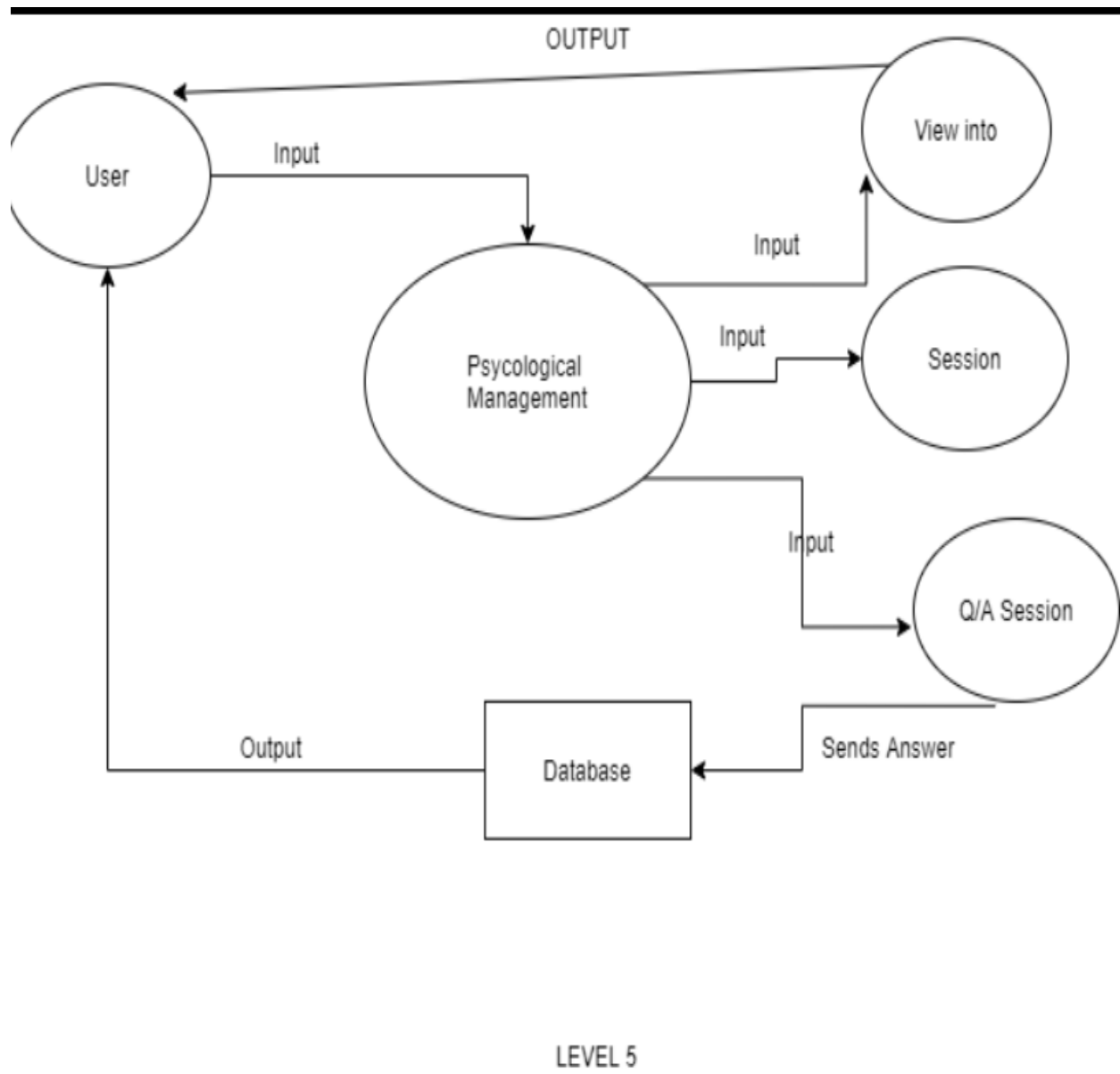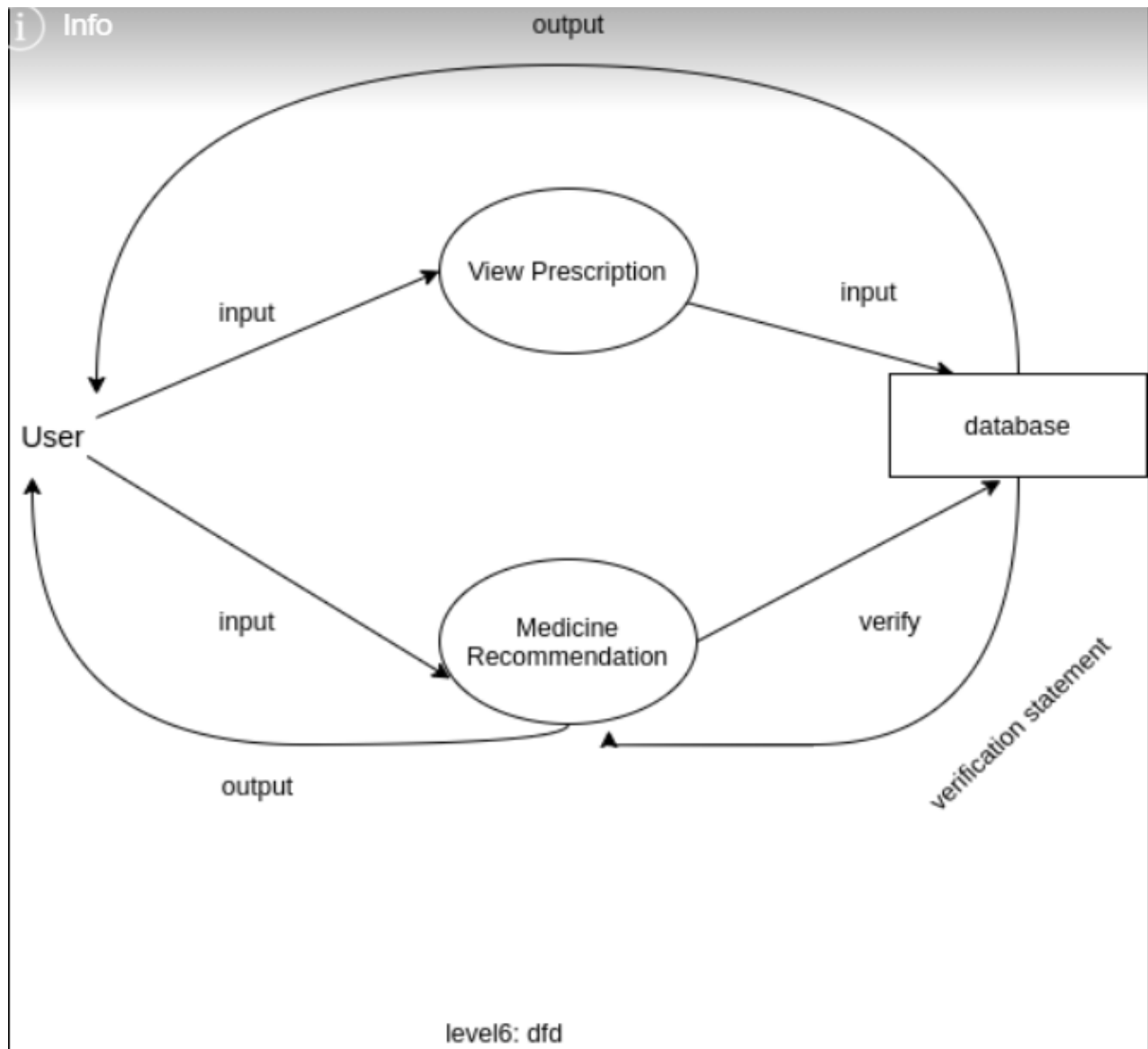Management

Input

Session

Input

Q/A Session

Output

Database

Sends Answer

LEVEL 5

level6: dfd

Architecture diagrams: