

# IT 314 SOFTWARE ENGINEERING

## LAB 2 : PROJECT KICKOFF

### HEALTH CENTER MANAGEMENT

GROUP: 12

#### **Needs for the project**

- 1) A software application that helps in day-to-day management of the health center.
- 2) Provide easy communication between health center staff and patients.
- 3) Managing inventory of the medicine availability of the hospital.
- 4) Patient's records must be maintained and monitored regularly.
- 5) Provide security for the user data and patient health records should be kept confidential.
- 6) Billing and financial management based on patient records.
- 7) The software should manage the schedules of the medical staff without any conflicts.
- 8) Reliability, Concurrent request handling, and high performance, low latency.
- 9) Information about the doctors like experience, achievements, etc should be transparent to the users.

#### **Features of the project**

1. User and staff registration, authentication and authorization will be provided.
2. Users will be able to book appointments for their health checkups and can alter their appointments.

3. Users can get their reports based on a patient's medical history and treatment plans.
4. Provides real-time guidance and recommendations based on patient data.
5. Medical staff can check their schedules using the app.
6. Users will be able to give feedback about the doctor and staff who treated them through this application.
7. All kinds of payment methods can be used to pay bills through the app.
8. Software will provide a video calling feature for those who are not able to visit the health center.
9. Patients can update details about medical insurance and previous medical treatments.
10. Application will send reminders or notifications about appointments and medicines regularly.
11. Application provides local language support.
12. In case of unavailability of laboratory equipment, user reports should be sent to the laboratory recommended by the doctor at the allotted time selected by the user.
13. Reports from the laboratory should be available to the user through the app.
14. Medicines can be delivered directly to the patient's address if the patient demands.

## **Functional Requirements**

1. User and staff registration, authentication and authorization will be provided.
2. Users will be able to book appointments for their health checkups and can alter their appointments.
3. Users can get their reports based on a patient's medical history and treatment plans.
4. Users will be able to give feedback about the doctor and staff who treated them through this application.
5. All kinds of payment methods can be used to pay bills through the app.

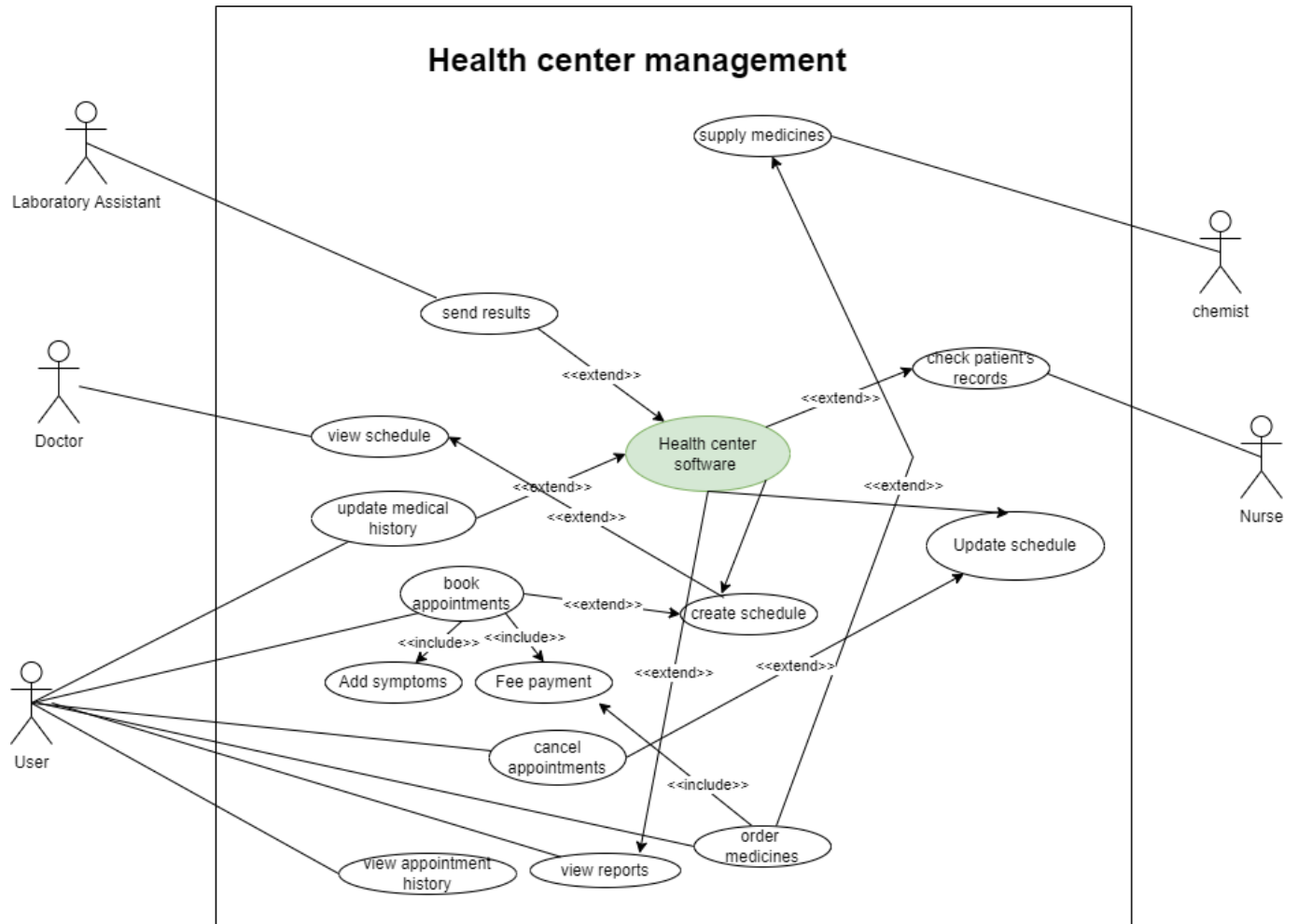
6. Software will provide a video calling feature for those who are not able to visit the health center.
7. Patients can update details about medical insurance and previous medical treatments.
8. Application will send reminders or notifications about appointments and medicines regularly.
9. In case of unavailability of laboratory equipment, user reports should be sent to the laboratory recommended by the doctor at the allotted time selected by the user.
10. Medicines can be delivered directly to the patient's address if the patient demands.

## **Non-Functional Requirements**

1. Application provides local language support.
2. Medical staff can check their schedules using the app.
3. Provides real-time guidance and recommendations based on patient data.
4. Reports from the laboratory should be available to the user through the app.
5. Reliability, Concurrent request handling, and high performance, low latency.
6. Information about the doctors like experience, achievements, etc should be transparent to the users.
7. The software should manage the schedules of the medical staff without any conflicts.
8. Provide easy communication between health center staff and patients.

## Use case diagram

version 1:



## Process model

We will be using an incremental mode for our software development.  
Why?

- In our software development requirements are superior and can be changed as per the requirements.
- Here we also have enough time so that we can develop different modules of the software and can test it in parallel with development.
- Here the risk of failure is reduced as we are developing the software in smaller increments.
- Also at the end it will lead to an improved software quality as each increment will be thoroughly tested and refined.

