Kingdom of Saudi Arabia

Majmaah University

Ministry of Education

College of Science Al Zulfi

Department of Computer Science and Information

المملكة العربية السعودية
وزارة التعليم العالي
جامعة المجمعة
كلية العلوم بالزلفي
قسم علوم الحاسب و المعلومات

Dental clinic management system

Student Affairs System
For College of science Al Zulfi
Department of Computer Science and Information

Graduation Project

Submitted in partial fulfillment of the requirements for the award of
Bachelor degree of Majmaah University
(Semester 1, 2022-22)

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Abstract

Dental college students face administrative problems because there are not enough patients in the clinic And this problem affects students by obtaining appropriate cases for them to treat, Also, the patient may not be able to be in the clinic to take his condition since there is no specific time to enter the Professor to take and register his condition, there is no motivation to help patients to be treated in the college clinics because the patient does not know how long it may take to diagnostic.

Also among the problems experienced by the student is that he is required to record the details of the case in the book, which is called (logbook) is a memoir that they require in each curriculum to write about what you have worked with the patient and then upload it to the Professor of the course at the end of the school year for the purpose of evaluating them, which is not a process where the student can lose the book or damage it.

Acknowledgement

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The deepest and warmest thanks are expressed to all people who have helped and supported us during the process of developing the project.

MAJMAAH UNIVERSITY,
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(CERTIFICATE BY STUDENT)

This is to certify that the project titled
"Dental clinic management system"
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Chapter One: Introduction

It is a system that connects four limbs the patient to the clinic, the student and the professor. It helps the patient to get an appointment, helps the student in choosing the right patient for him and helps the professor to evaluate students. It is an administrative system that facilitates all parties in dental college clinics.

1.1 Problem Definition

Dental college students face administrative problems because there are not enough patients in the clinic And this problem affects students by obtaining appropriate cases for them to treat, Also, the patient may not be able to be in the clinic to take his condition since there is no specific time to enter the professor to take and register his condition, there is no motivation to help patients to be treated in the college clinics because the patient does not know how long it may take to diagnostic.

1.1.1 Goals

1- Enable students to choose the patients cases at home or anywhere outside of college.
2- Enabling a course professor to know what students have done and the patient file to help them evaluate students.

1.1.2 Objectives

1. facilitate for the patient to get a proper appointment.

2. supportive the student to write notes in the patient's record to inform the diagnostic professor if he wants to review again.

3. Enabling students to send a record to the course professor in a way that helps to reserve information.

4. The patient can cancel the appointment, helping students find another patient.

Chapter Two: System Analysis and Specification

2.1 Introduction

This section demonstrates how the system works and represents the logical relationships of entity sets to explain the workflow of the system.

2.2 Data Modeling

It is the creation of types of graphics that explain the mechanism of the project or system through texts and symbols.

2.2.1 The Entity of Relationships Diagram (ERD) of Project

An entity-relationship diagram (ERD) explains how the connections of entity groups are gathered in a database. An entity here refers to an item, a part of data. An entity set is defined as a group of similar entities which have features that determine their properties. An ER diagram (ERD) “models the data structure of a reality in terms of entities, relationships.

ER diagram (ERD)

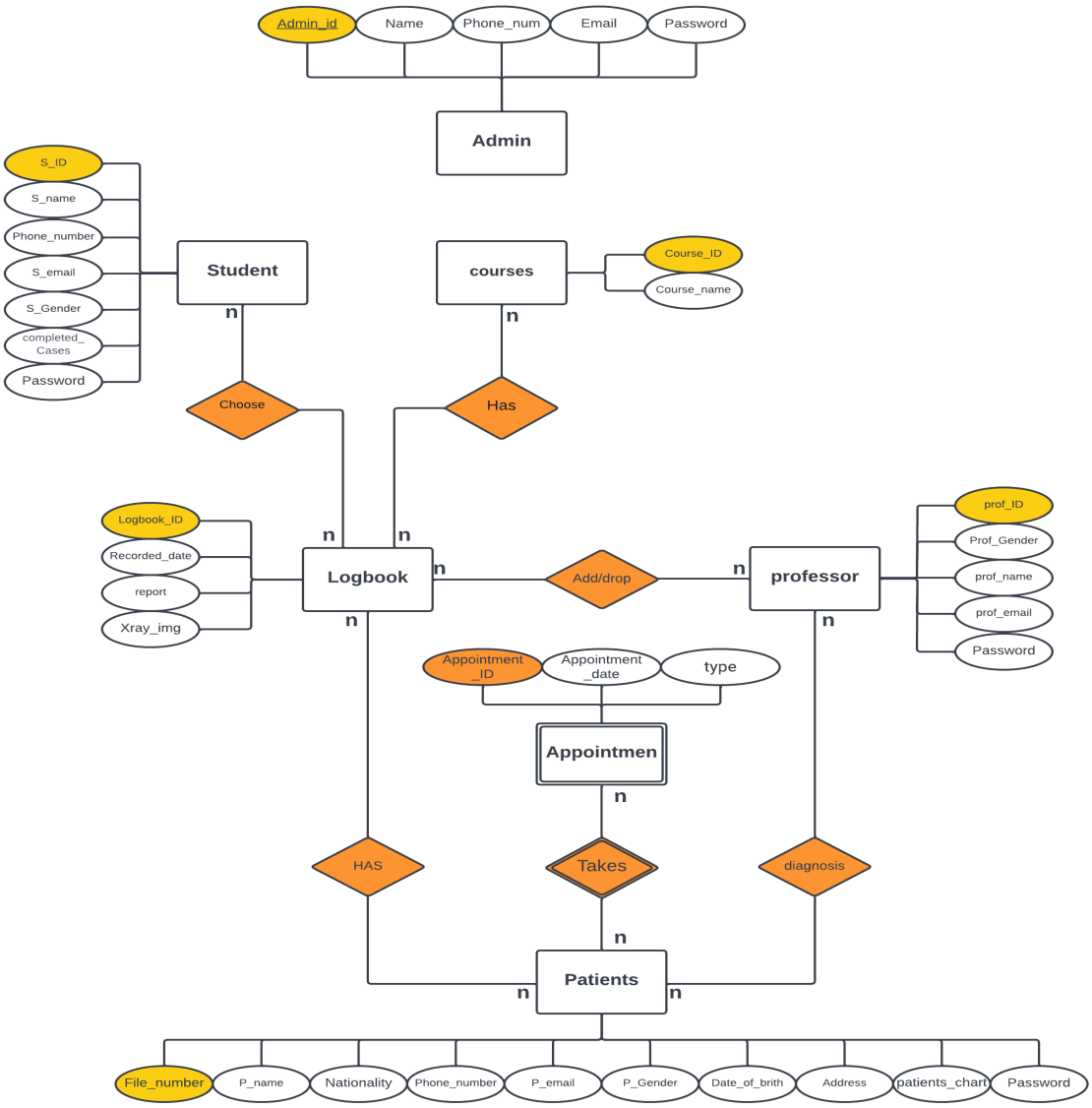

Figure1 ERD

2.2.2 Use case

Use case is an important and useful requirement to explain how the system works. A use case is defined as a description of a series of events which result in a system to perform a task

The use caseis useful for many people who have a relationship with the system such as customers, managers, analysts, developers, testers, technical writers, and user-experience designers.

Admin Scenario:

1. The ID number and password are entered on the login page.
2. Select the appointments icon to cancel and add appointments.
3. Choose on users' icon to delete, edit and watch accounts.
4. Choose on Icon Add New Account and User Identification (Professor, Patient, Student, Admin)
5. log out.

2.2.2.1 This drawing for Use case Admin.

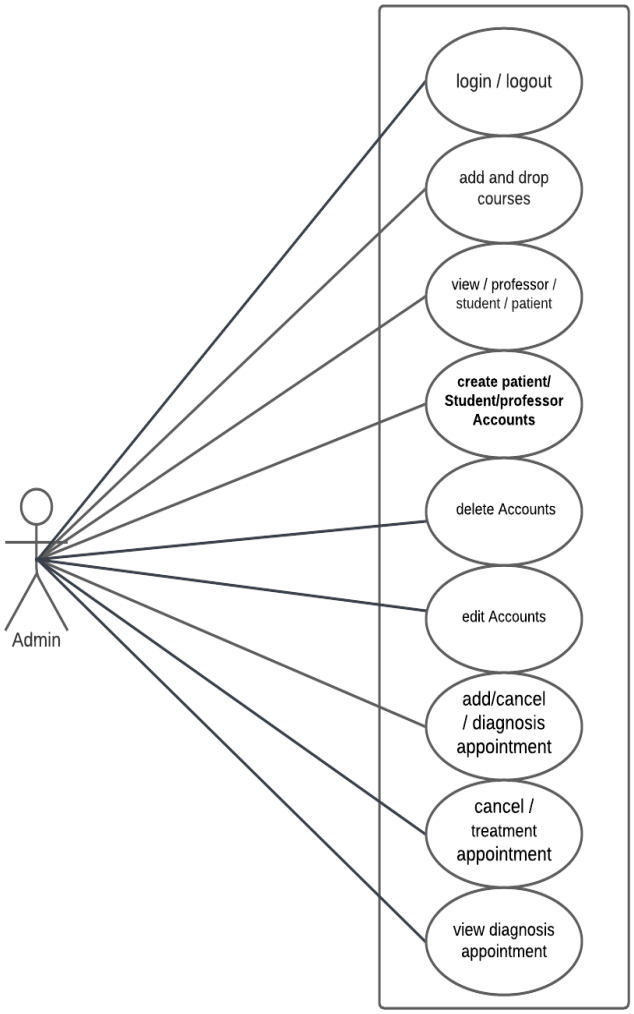

Figure2.use case for Admin

Professor Scenario:

1. The ID number and password are entered on the login page.
2. Watch patients' appointments through the appointment icon and confirm the appointment.
3. diagnose patients, upload x ray image and convert the appointment for treatment.
4. Writing notes in patients' files to determine students about the illnesses of the patient.
5. check students' files for the number of completed cases they have.
6. check and approve students' logbook.
7. log out.

2.2.2.1 This drawing for Use case Professor.

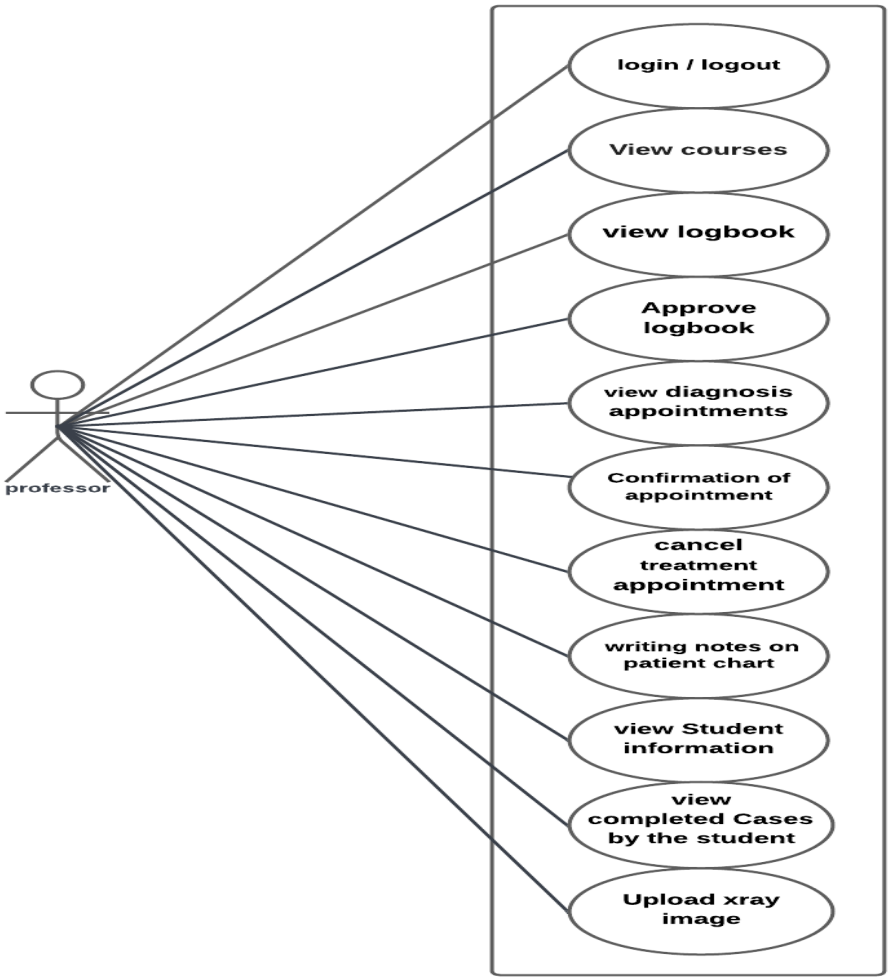

Figure 3.use case for Professor

Student Scenario:

1. The ID number and password are entered on the login page.
2. check treatment appointments for patients and choose the correct patient for the student.
3. Writing notes in the patient's chart.
4. check courses.
5. Write the patient report on logbook page.
6. Update personal information.
7. log out.

2.2.2.3 This drawing for Use case Student.

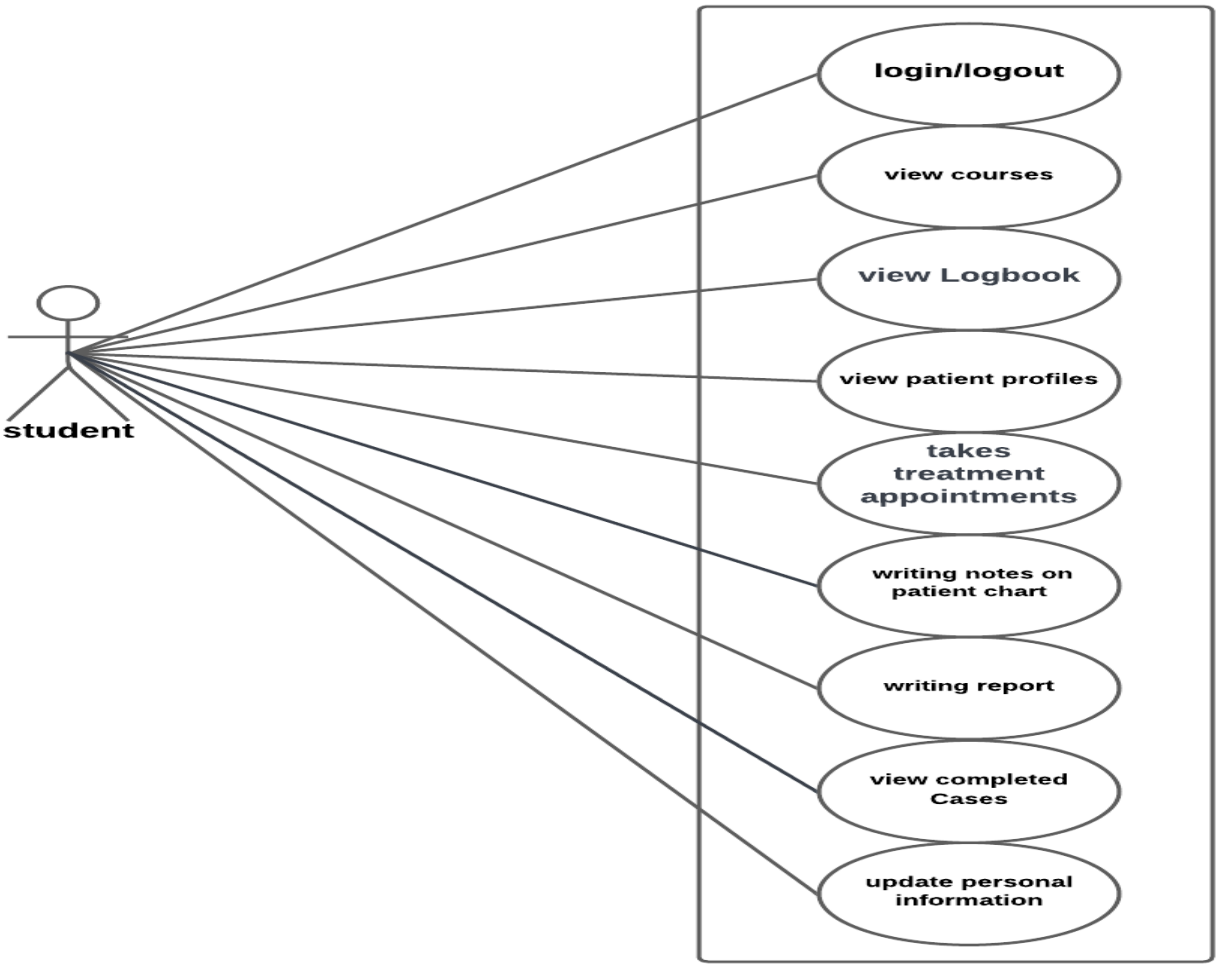

Figure 4.use case for student

Patient Scenario:

1. The patient creates the account if he does not have an account.
2. Text message containing file number is sent.
3. File number and password are entered in the login page.
4. The patient books a diagnostic appointment through the appointment booking page.
5. The patient cancels appointments (if he wants to).
6. The professor's information can be viewed on the diagnostic appointments page.
7. Update personal information.
8. log out.

2.2.2.4 This drawing for Use case Patient.

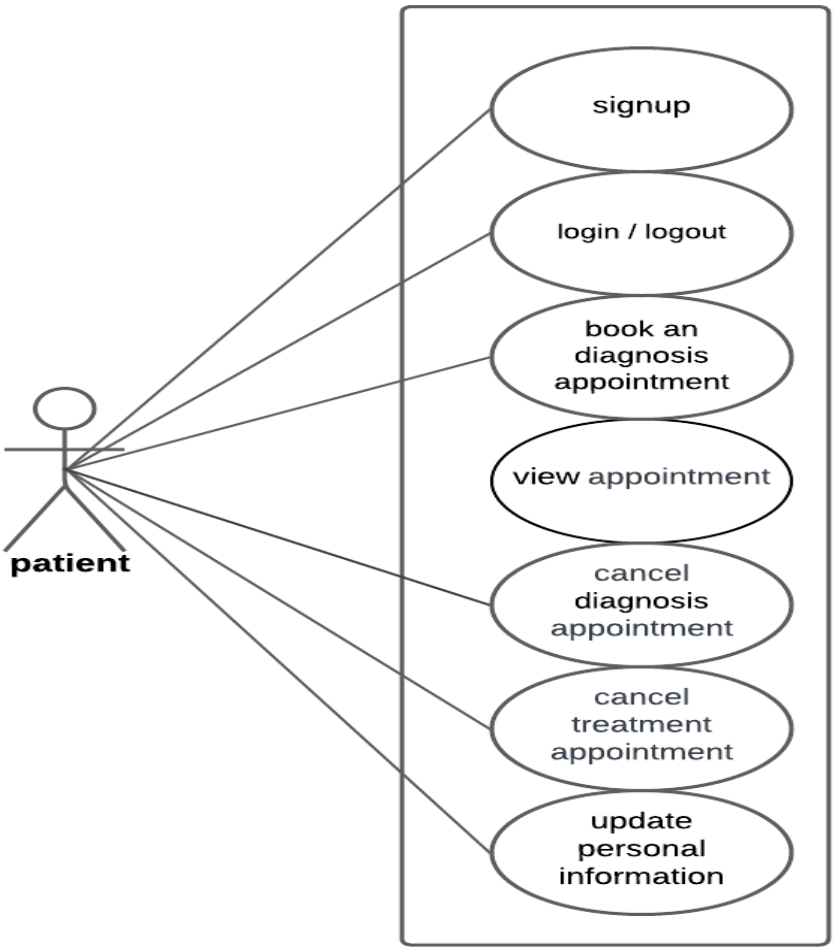

Figure 5.use case for Patient

2.2.3 Sequence Diagram

Sequence Diagrams are representative diagrams that explain the workflow of a system operations. define sequence diagram as “visual representations of object interactions in a system and can provide valuable information for program comprehension, debugging, maintenance, and software archeology”.

2.2.3.1 Admin

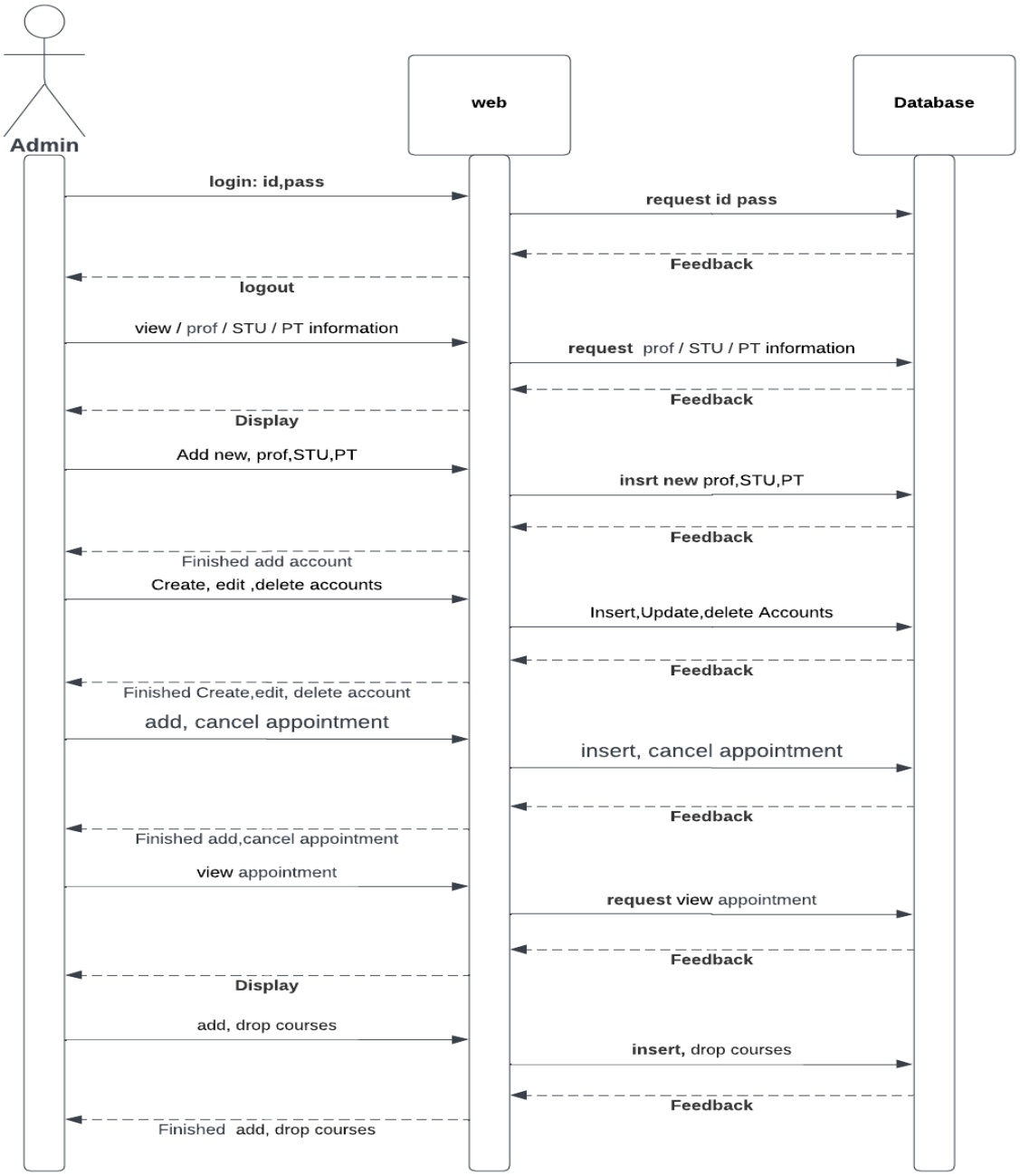

Figure 6. Sequence Diagram Admin

2.2.3.2 Professor

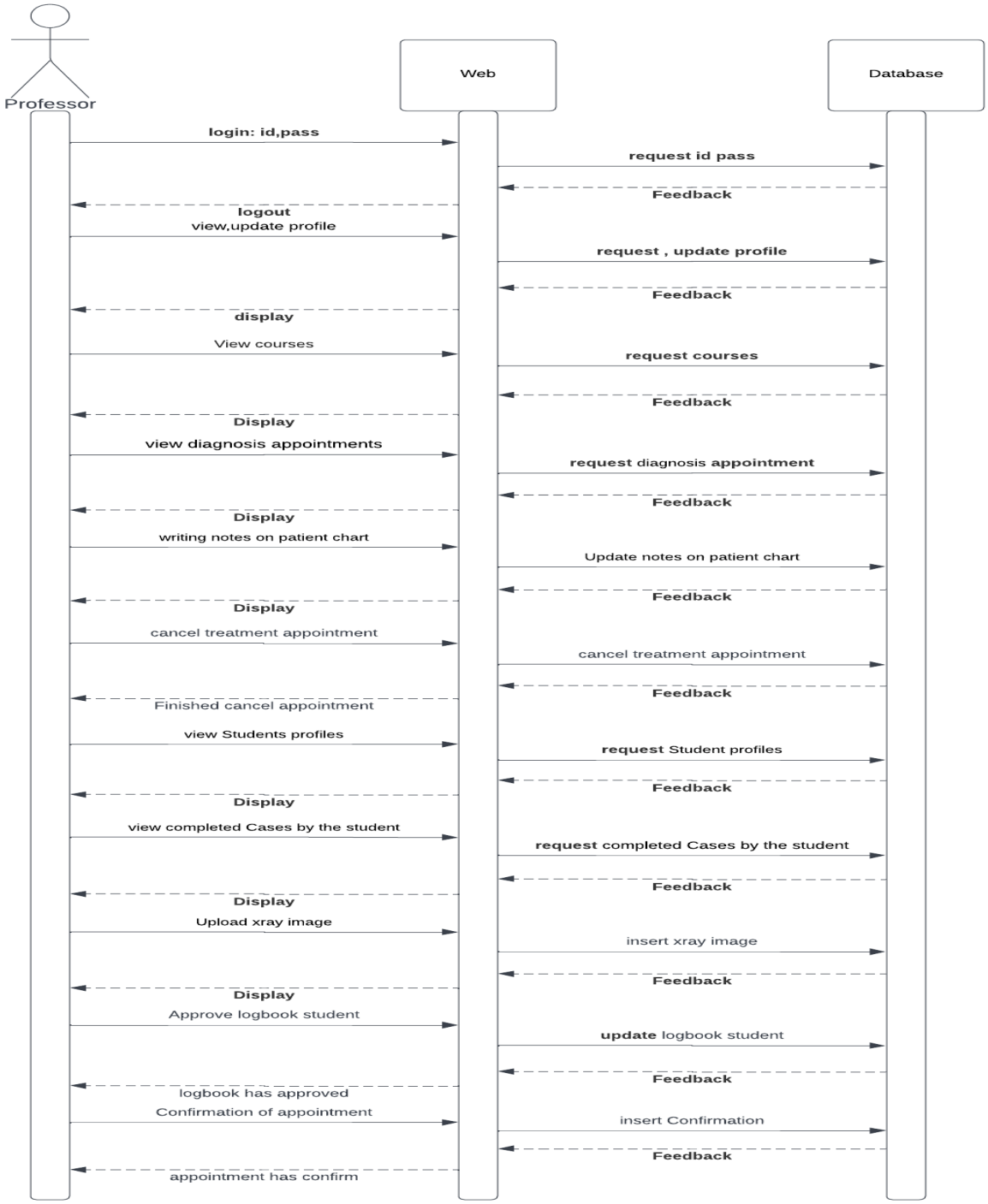

Figure 7. Sequence Diagram Professor

2.2.3.3 Student

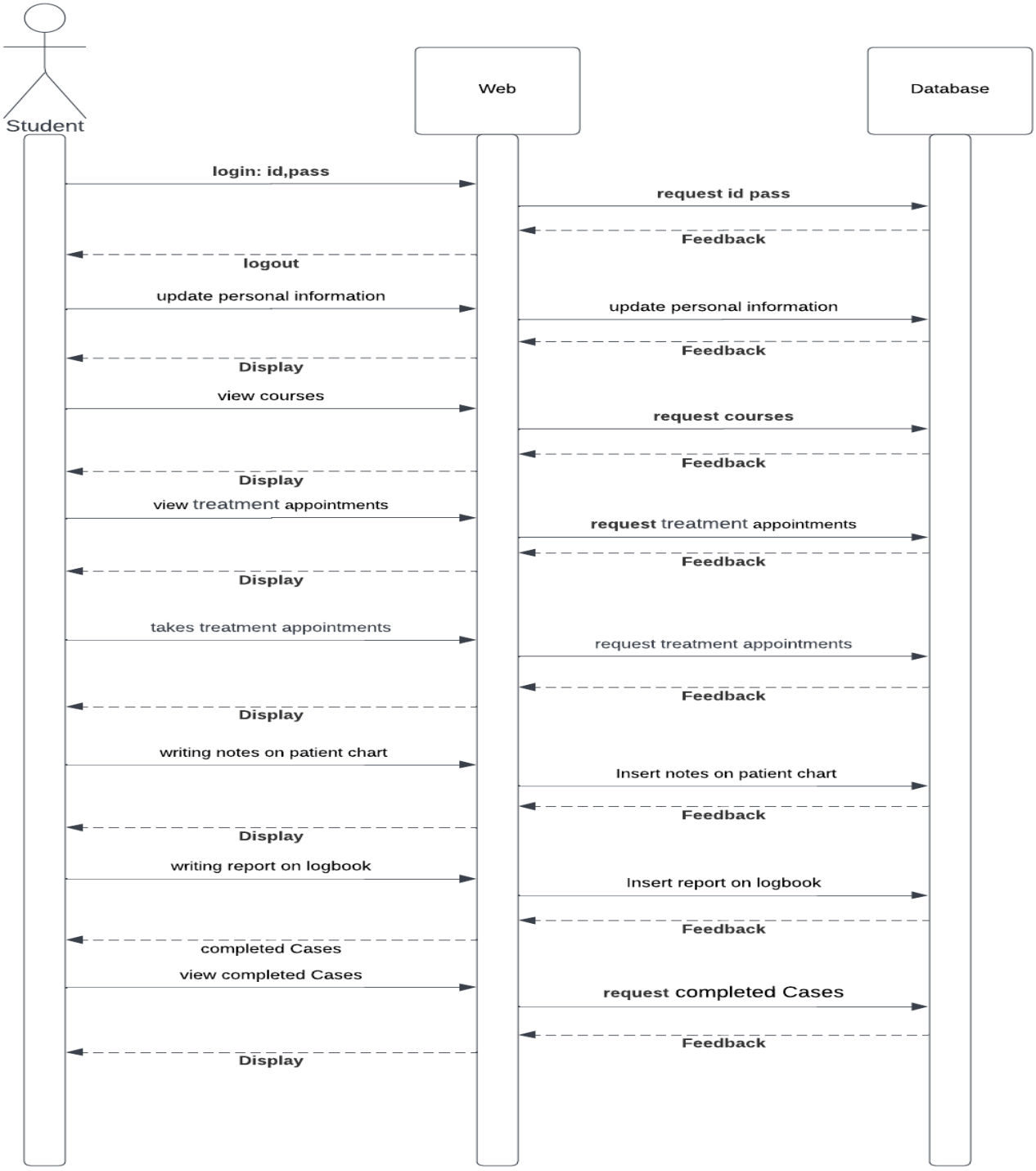

Figure 8. Sequence Diagram Student

2.2.3.4 Patient

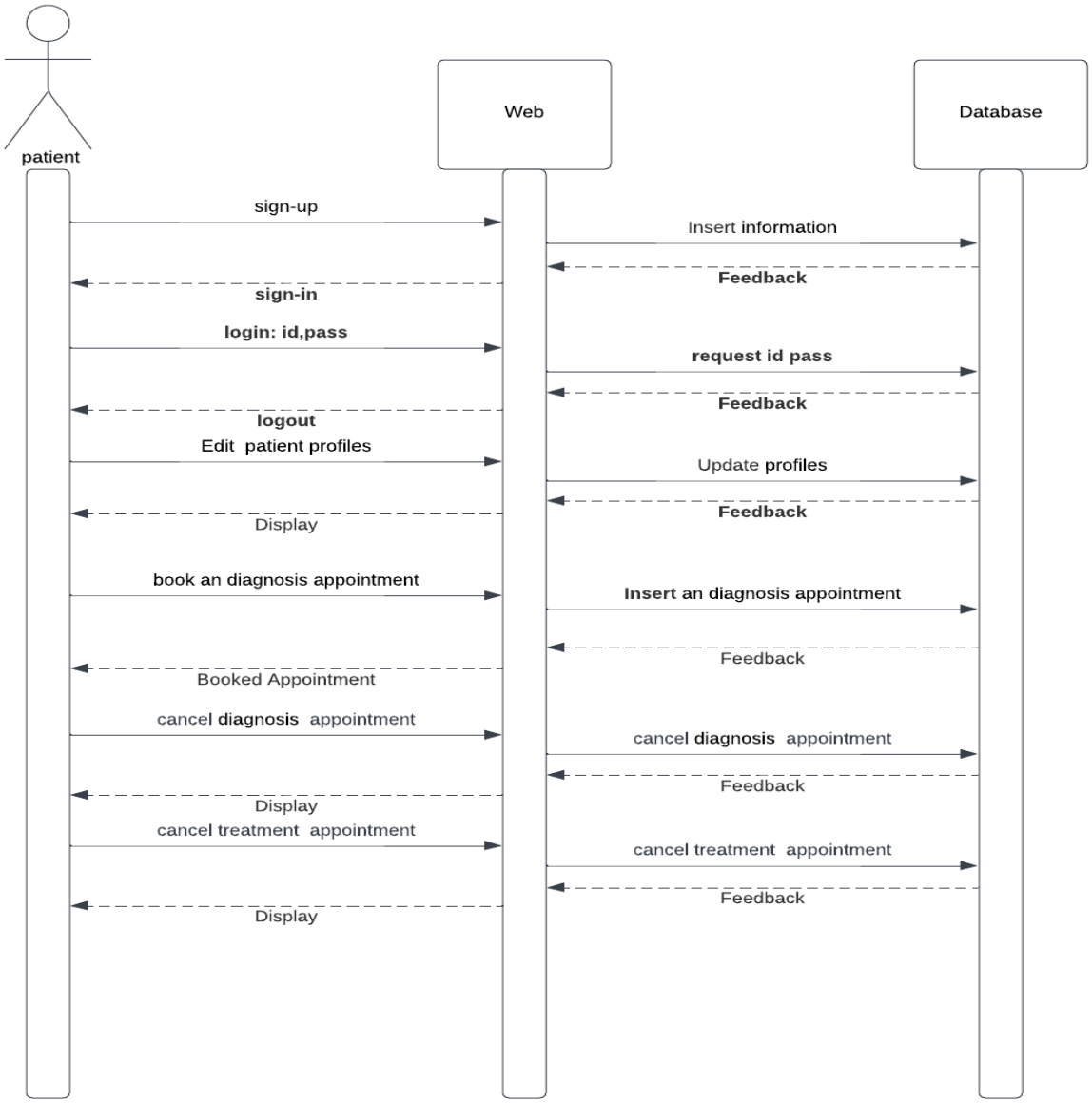

Figure 9. Sequence Diagram Patient

2.2.4 UML Class Database Diagram

The class diagram shows the building blocks of any object-orientated system. Class diagrams depict a static view of the model, or part of the model, describing what attributes and behavior it has rather than detailing the methods for achieving operations. Class diagrams are most useful in illustrating relationships between classes and interfaces as it is represented by figure 10.

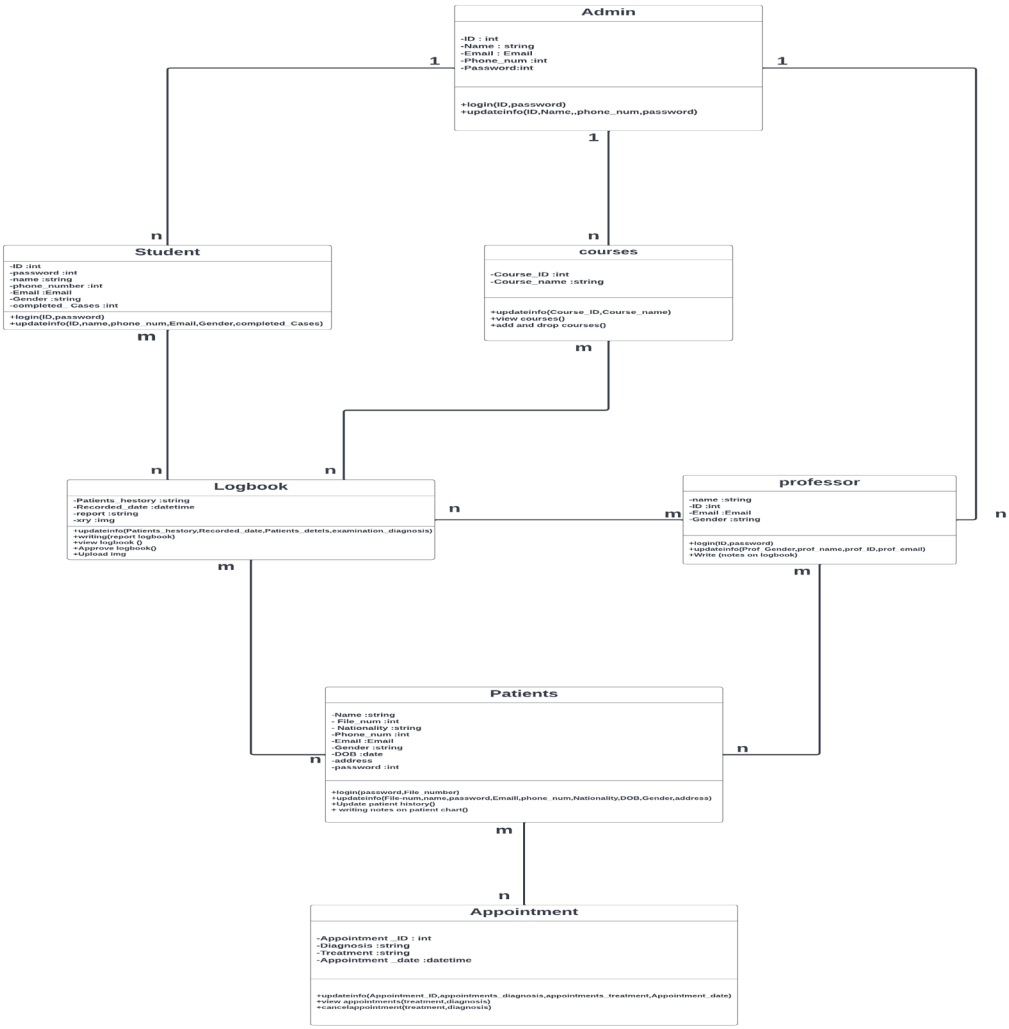

Figure 10. class diagram

2.2.5 Database schema

Figure 10. class diagram *Figure 10. class diagram*

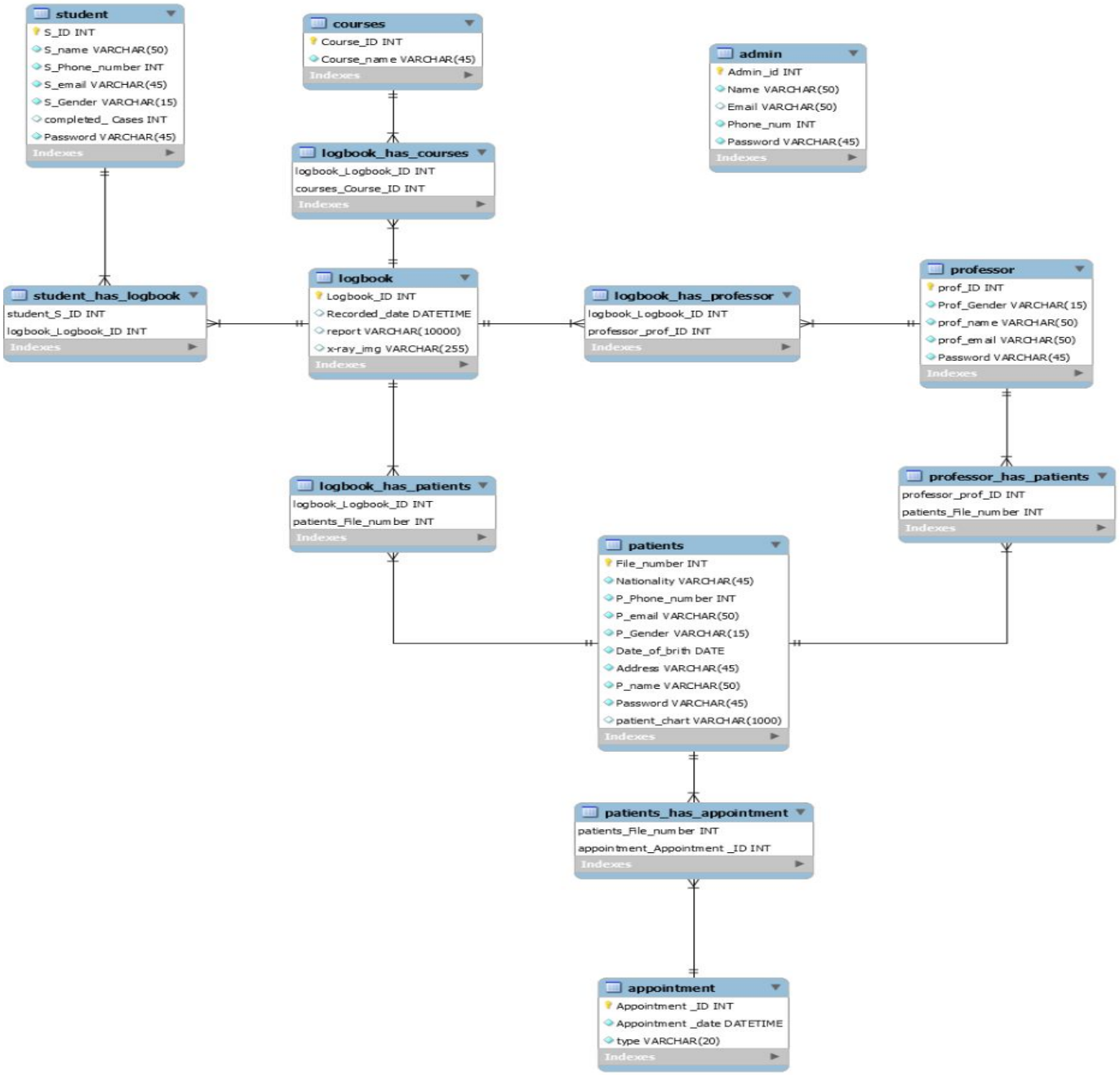

Figure 11. Database schema

Chapter Three: Implementation and Testing

3.1 user interfaces

3.1.1 Login page:

It is one page for all users in the system, as the patient, student and professor all log in via one page.

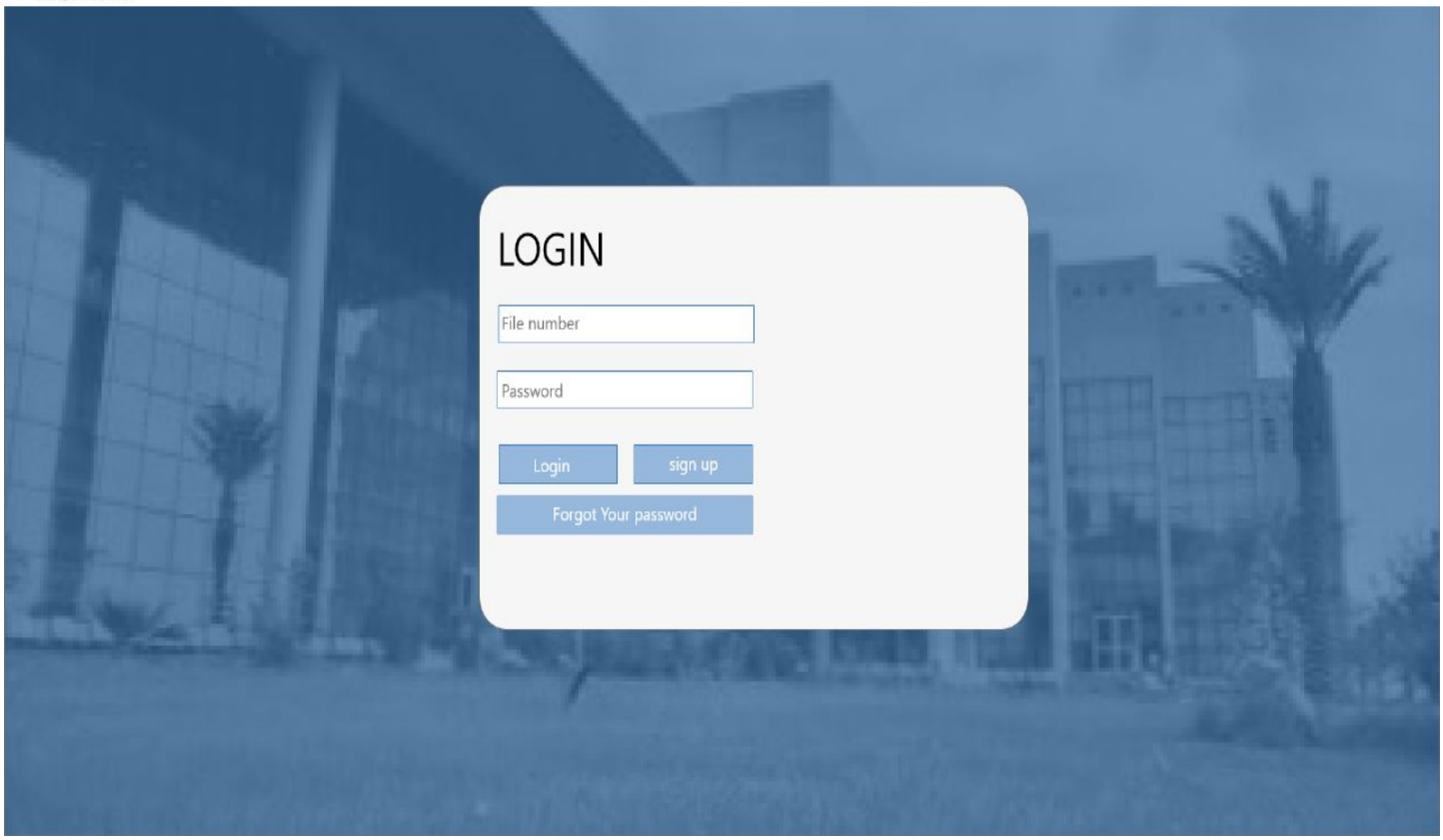

Figure 12. user interfaces (login)

3.1.2 Register a new account for the patient

But account registration only for patients because students and professors are created their accounts by the administrator to confirm that the account is due to them.

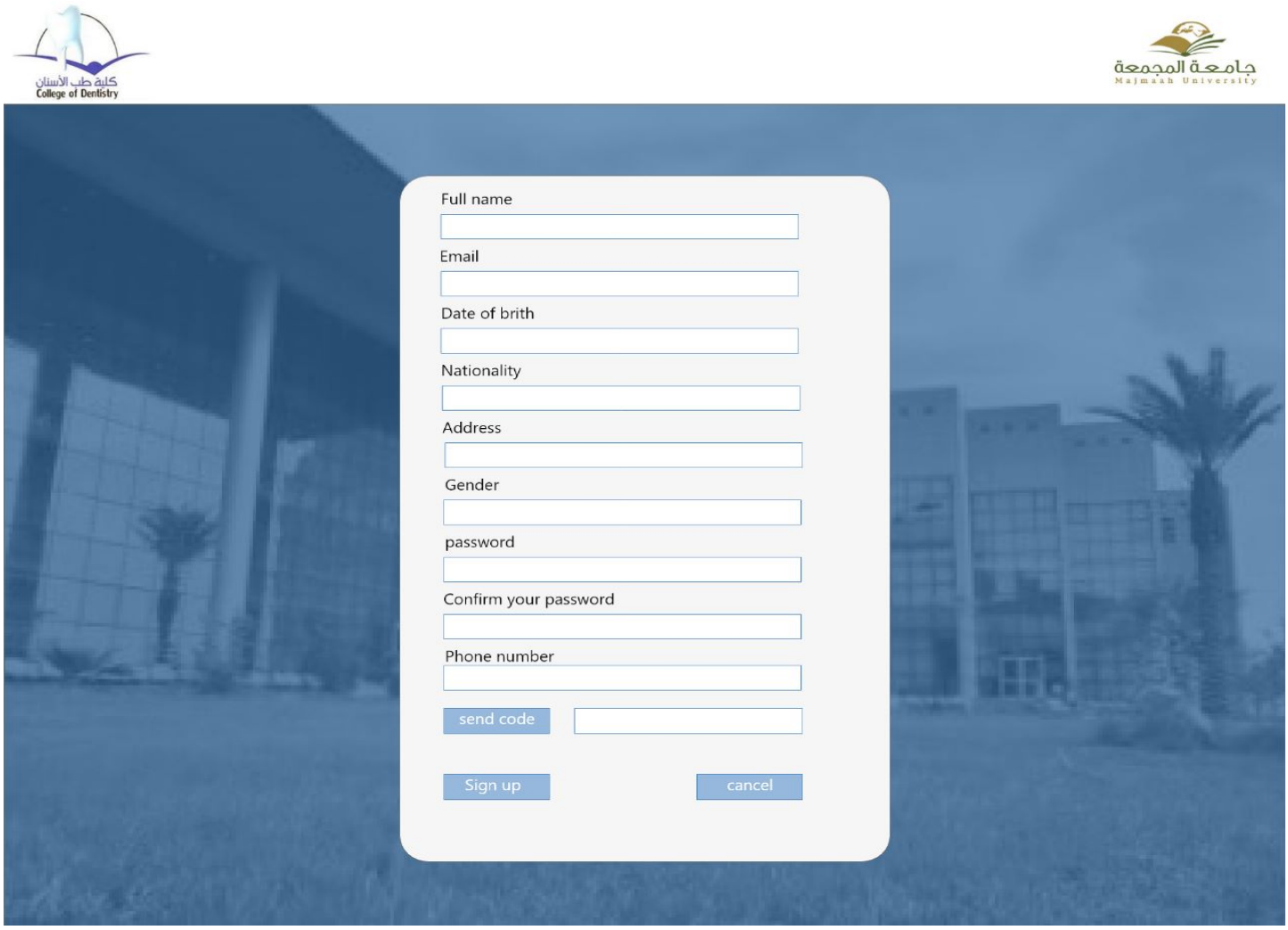

Figure 13. new account for the (patient)

3.2 The main page of the patient

On the patient's home page there are notifications of the appointments and their times. Appointments are divided into two sections (therapeutic, diagnostic). The patient can cancel the appointment to the appointment page according to the date to be cancelled. The patient can update his or her information and book an appointment by side tape.

Figure 14. The main page of the (patient)

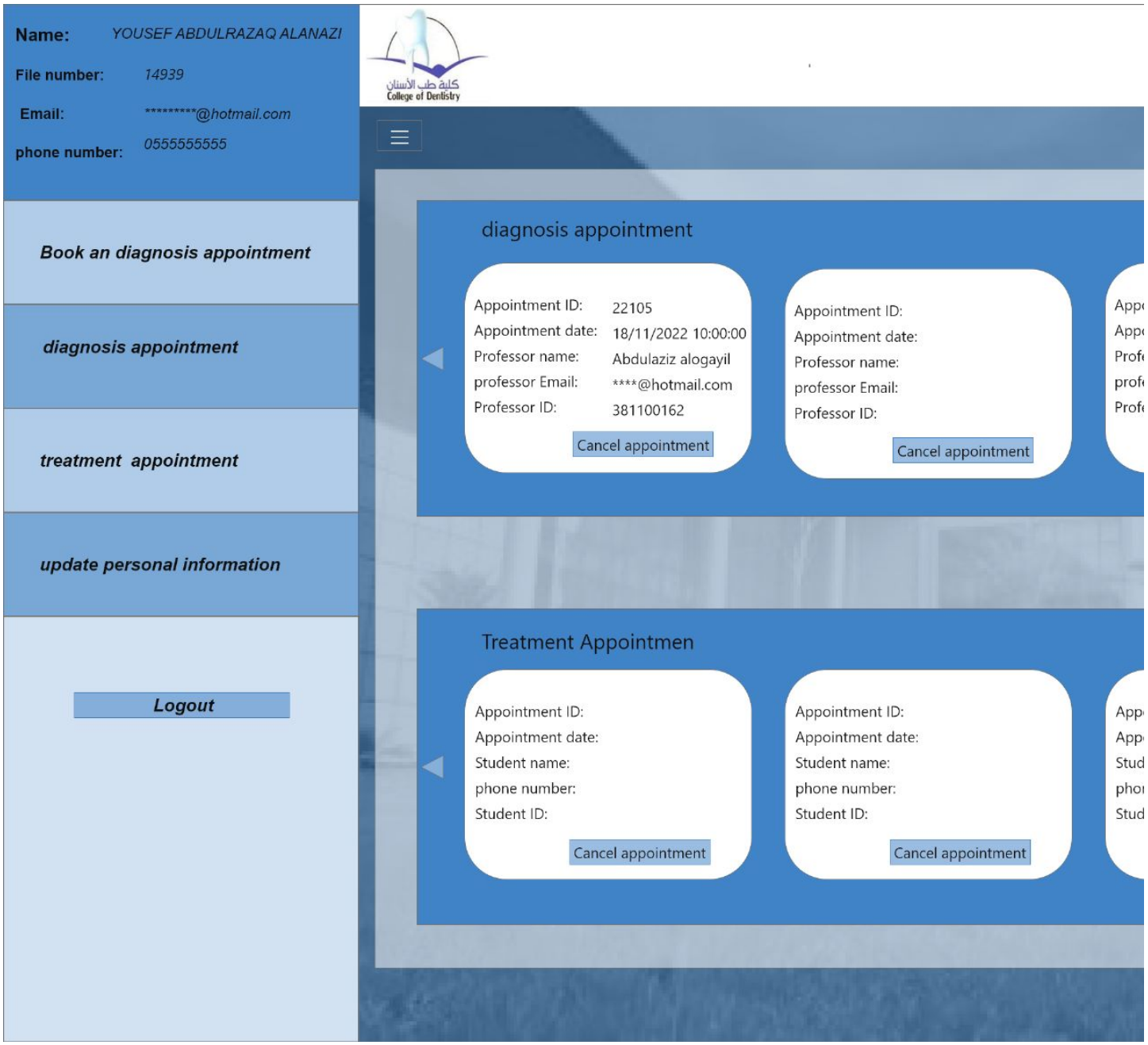

Figure 15. The main page of the (patient)

3.2.1 Conclusion:

It is a project that serves both the patient and the student and has them under one roof to improve the outputs of students, helping the patient to treat it better and more professionally.

Reference:

www.lucidchart.com

https://www.adobe.com/sa_ar/products/xd.html