**Lab 2**

**Identify software requirements**

* The system allows Office Manager to register Dentists.

Dentist information: unique ID number, first Name, last Name, contact Phone Number, Email, and Specialization.

* The system allows Office Manager to enroll new Patients.

Patient information: First Name, Last Name, Contact Phone Number, Email, Mailing Address and Date of Birth.

* The system allows Patients to request an appointment online to see a Dentist.
* The system allows Office Manager to book an appointment.

Appointment information: patient, date and time, dentist, surgery location.

* The system should maintain information about each Surgery office.

Surgery office information: name, location address, and telephone number

* The system should send a confirmation email to Patients when an appointment is booked.
* The system allows Dentists to sign in, sign out the application.
* The system allows Dentists to view list of appointments.
* The system does not allow a Dentist to have more than 5 appointments in a week.
* The system allows Patients to sign in, sign out the application.
* The system allows Patients to view their appointments.
* The system allows Patients to cancel their appointments.
* The system allows Patients to request to change their appointments.
* The system should not allow a Patient to request a new appointment if they have an outstanding, unpaid bill.
* The system should record bill and payment of Patients.

**Entity Diagram**

* **OfficeManager**
* **Dentist**

Attributes: id, firstName, lastName, phoneNumber, email, specialization

Relationships:

One-to-Many with Appointment

* **Patient**

Attributes: id, firstName, lastName, phoneNumber, email, mailingAddress, dateOfBirth

Relationships:

One-to-Many with Appointment

One-to-Many with Bill

* **Appointment**

Attributes: id, date, time, status

Relationships:

Many-to-One with Dentist

Many-to-One with Patient

Many-to-One with SurgeryOffice

* **SurgeryOffice**

Attributes: id, name, locationAddress, telephone

Relationships:

One-to-Many with Appointment

* **Bill**

Attributes: id, amount, status, issuedDate, paidDate

Relationships:

Many-to-One with Patient

One-to-Many with BillItem

* **BillItem**

Attributes: price, description, operatedDate

Relationships:

Many-to-One with Bill

* **Service**

Attributes: name, price

Relationships:

One-to-One with BillItem

