MAHARISHI INTERNATIONAL UNIVERSITY
Master's Degree in Computer Science
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Software Requirements Discovery

Functional Requirements

1. **User Management**

   1.1. The system must allow an Office Manager to register dentists with details: unique ID, first name, last name, phone number, email, and specialization.

   1.2. The system must allow the Office Manager to enroll new patients with details: first name, last name, phone number, email, mailing address, and date of birth.

   1.3. The system must allow patients to sign in and view their appointments.

   1.4. The system must allow dentists to sign in and view their appointments and the details of scheduled patients.

2. **Appointment Management**

   2.1. The system must allow patients to request appointments either by calling the office or submitting an online form.

   2.2. The Office Manager must be able to book appointments and send confirmation emails to patients upon successful booking.

   2.3. Patients must be able to request cancellations or rescheduling of their appointments.

   2.4. Dentists cannot be assigned more than 5 appointments per week.

   2.5. The system must prevent patients with outstanding, unpaid bills from requesting new appointments.

3. **Surgery Information Management**

   3.1. The system must provide information about surgery locations, including name, address, and phone number.

4. **Billing Management**

   4.1. The system must track patient billing and check for outstanding payments before allowing further appointment requests.

5. **Notifications**

   5.1. The system must send confirmation emails to patients once an appointment is successfully booked.

Domain Model UML Class Diagram

OfficeManager

+ name: type
+ contact_info

Dentist

- id
- firstName
- lastName
- contactNumber
- email
- specialization

1 — *

1

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5 per week

Patient

- id
- firstName
- lastName
- contactNumber
- email
- address
- dateOfBirth
- hasOutstandingBill

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1

Appointment

- appointmentID
- date
- time
- isConfirmed

1

1

Billing

- billID
- amountDue
- paymentStatus

1

1

Surgery

- name
- address
- contactNumber