

Problem Statement/Description:

Advantis Dental Surgeries, LLC (ADS) is a company that is in the business of managing a growing network of dental surgeries which are located across cities in the South West region. Assume you have been hired by the company, as a Lead Software Engineer and tasked to lead the effort in designing and developing a web-based software solution (i.e. a website) that the company will be using to manage their business.

The system will be used by an Office Manager to register Dentists who apply to join their network of dental surgeries. Each Dentist is given a unique ID number and their First Name, Last Name, Contact Phone Number, Email, and Specialization are recorded into the system. The Office Manager also uses the system to enroll new Patients who require dental services, including the Patient's First Name, Last Name, Contact Phone Number, Email, Mailing Address and Date of Birth. A Patient can call in to request an appointment to see a dentist. A Patient can also request an appointment by submitting an online form on the ADS website. Upon receiving a request for an appointment, the Office Manager can then book the appointment and the system will send a confirmation email notifying the Patient and the appointment gets recorded accordingly.

Dentists should be able to sign in to the system and view a listing of all their Appointments, including details of the Patients they have been scheduled to see. Each appointment is normally made for a specific date and time and the dentist is expected to see/treat the patient at one of ADS's surgery locations. The system should provide information about each Surgery, including its name, location address, and telephone number. Patients should be able to sign in to the system and view their appointments, including the information of the dentist they have been booked to see. Patients should also be able to request to cancel or change their appointments.

A dentist cannot be given more than 5 appointments in any given week. The system should prevent a Patient from requesting a new appointment if they have an outstanding, unpaid bill for dental service they have received.