

CO226 – Database Systems

Database Project - Description

Group No. 19 (E/17/018, E/17/090, E/17/168)

The project is titled '**Doctor Channeling Database System**' and it aims to design and develop a database system which facilitates finding a doctor according to a patients needs and booking an appointment with the preferred doctor. The system is intended to function as a standalone service which contains details of doctors and the hospitals they can be channeled at on a given date and time. It will allow the patients to book appointments using the system and the appointments made with the system shall be relayed to the hospital in order to update their own internal databases. The doctors will also be able to view the list of appointments made with them.

Thus, three users that will access the database can be established and the relevant features presented to each user is as follows.

1. Patients

- Search for doctors based on their needs

The patients are provided the facility to search for a doctor by **name**, **specialty** (e.g. – General Physician, Surgeon etc.), **hospital** and **availability** on a certain date and/or time. The system will display all available doctors to the patient according to their search criteria and the patients can choose a doctor to make an appointment with.

- Make an appointment with a chosen doctor

Once the patient has selected the doctor they wish to channel, they are given the ability to make an appointment with said doctor at a chosen hospital, date and time. The patient can check the number of appointments already made with the doctor and choose to make the appointment with the doctor by providing their details. Once the appointment is confirmed, the database is updated with the patient's details and the new appointment details are sent to the hospital.

- View and cancel appointments

A patient is also given the feature to view the appointments they have made using the system and cancel them within a certain timeframe if they wish to do so.

- View hospital facilities

It may be important for the patient to know the facilities available at the hospital such as availability of parking, scanning rooms etc. Therefore, the system would contain a feature that allows the patient to view such details regarding the hospitals.

- Notifications on doctor's arrival

Once an appointment has been made, the contact details of the patient are used to notify them when their doctor has arrived at the hospital. This would be a very useful feature to the patient as it would help them to get to the hospital on time.

2. Hospitals

- View appointments made at the hospital

The hospital would require information on appointments made with the system for their own reference since, ultimately, the appointment is between the patient and the hospital. Hence, hospitals are provided with the feature to access the appointments made at their hospital and will be notified whenever a new appointment is made.

- Adding external appointments to the list of appointments

It would be common for patients to make appointments at a hospital by other means. (e.g. – in person at the hospital, over the phone) These appointments should also be added into the system in order to provide new patients with an accurate appointment number when they are attempting to book an appointment. Therefore, the hospitals are given access to add new records to the database for patients external to the database.

- Updating own details

Due to a variety of circumstances, the hospitals may need to change their details in the database. (e.g. – moving to a new location, expanding the number of channeling rooms, facilities upgrades etc.) In addition to that, the schedules for channeling different doctors as well as the doctors available at the hospital may change. These changes must be reflected in the system to provide accurate and up-to-date information to the patients when making an appointment. Hence, the hospitals are given the facility to change the various details pertaining to the hospital and doctor schedules.

3. Doctors

- View appointments

Doctors are also provided access to the system so that they can view the appointments that have been made for a given day and get an idea of their schedules.

As described above, there are three types of users of the database system and, depending on the user, they have been provided with various different features which allows them to access required sections of the database according to their needs.