

# Databases Final Project

## Project Report

### Brief Explanation of Tables

**Appointments Table** - Stores appointment data such as patient, treatment, dentist performing etc.

**Bills Table** - Stores data on issued bills

**nextWeek View** - Shows upcoming appointments in the next week

**Patients Table** - Stores details of patients attending the practice

**Payments** - Records details of payments taken against patient balances

**Referrals** - Stores details of patient referrals to specialists

**Roles** - Stores roles for staff members to be assigned to, e.g. secretary, dentist.

**Specialists** - Stores details of specialists for patient referrals.

**Staff** - Stores details of staff members

**Treatments** - Stores details on treatments provided by the practice.

### Specific Instructions/Key Queries for Implementation

Staff in the dental practice are stored in the staff table. Each staff member is assigned a role as appropriate, currently this can be 'dentist' (roleID=1) or 'secretary' (roleID=2). See `addStaff` query.

Referrals are created as required for patients. See the `addReferral`, `listReferrals` and `listSpecialists` queries. On receipt of reports following referrals the `referralReport` query can be used to record receipt.

The `addAppointment` query can be used to create appointments. Upcoming appointments and accordingly available appointment slots can be viewed using the `viewAppointments` query. The creation of appointments requires the patientID of the person seeking the appointment, this can be found using the `searchPatients` query.

For amendment of appointments or cancellation of appointments, use the `amendAppointment` and `cancelAppointment` queries respectively. The `cancelAppointment` query adds the late cancellation fee to the patients outstanding balance if applicable. Late cancellation query updates the appointment to a cancellation with a charge of 10 so it appears on the bill.

For viewing next weeks appointments the `viewNextWeek` query can be used which includes contact details for patients in order to send them reminder correspondence.

The `generateBills` query shows the details which need to be sent to patients detail the outstanding amounts owed. The bills itemise the procedures being billed including cancellation and generate a bill no. and amount in that table. Once these bills have been created and issued to patients the `updateBillsTable` and `updateOutstandingBalances` query can be run to mark these procedures as billed and transfer the owed amounts to the patients outstanding balance.

Should the cost of any treatments need to be updated the `updateTreatmentFee` query can be used, further details can be found in the comments of this query.

Payments received come off the patient's outstanding balance using the `takePayments` query.

When a patient arrives the `checkIn` query is used to mark this appointment as `billable`.

The dentist can update the patients notes following the appointment with the `addNotes` query. If any follow up appointments are required the patient can arrange them before leaving the practice.

## References

Kandasamy, S. (2015). Codd's Twelve Rules. Retrieved 3 May 2022, from <https://www.exploredatabase.com/2015/02/codds-twelve-rules.html>