

The Smile Factory Case Study

Author: Tomos Leggett · **Student ID:** 1901852 · **Module Code:** ACCA5026

The Smile Factory Case Study

[Abstract](#)

[ERD Diagram](#)

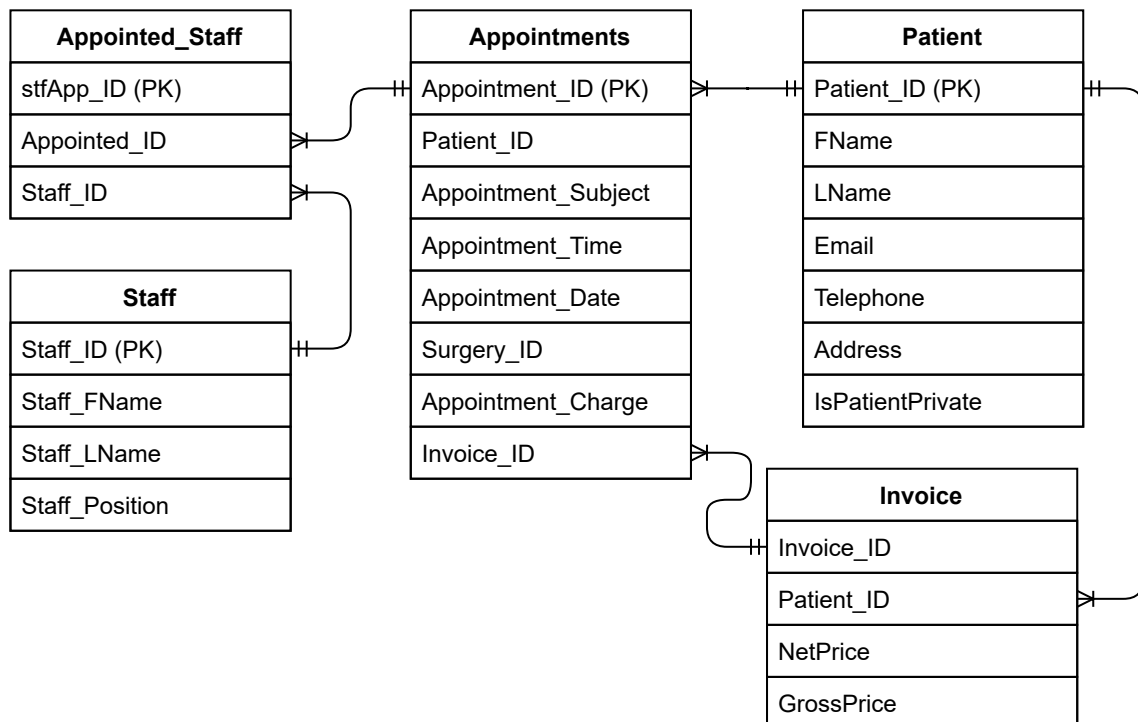
[Performance Tuning](#)

[References](#)

Abstract

This report outlines the concluded solutions the author has made for the case study. Below you will find an ERD diagram of the database created by the author, along with the author's solution to the performance tuning of the database outlined in Task 2.1.a. The SQL files themselves have been compressed into a ZIP file and attached to the Module Assignment section on Moodle appropriately.

ERD Diagram



Performance Tuning

The author was tasked with creating secondary indexes for the database in order to improve performance. The author decided to index various columns for 3 tables:

- **Patients**
First Name, Last Name, Email, Telephone, Address.
- **Appointments**
Appointment Subject, Appointment Date, Appointment Time, Appointment Charge.
- **Staff**
First Name, Last Name, Position

The author indexed various columns that contain data that had very little chance of changing during a transaction, such as names, positions, Emails, Addresses etc. The author did not index any primary keys or foreign keys, as those IDs are subject to change many times during transactions.

References

[1] "SQL Tutorial", *W3schools.com*, 2021. [Online]. Available: <https://www.w3schools.com/sql/default.asp>.