

Jack Partridge-Database Report

by Jack Partridge

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Database design (Local dental & orthodontic surgery)-report

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Introduction

My task is to design & build a suitable database for a dental & orthodontic surgery known as “The Smile Factory”. They love to offer friendly services with relevant referrals for specialist dental treatments. I have been assigned the job to change their old outdated paper based system to a new updated technology system that is capable of storing various required information with a user-friendly interface. When doing the design I shall make sure to include all the needed entities, suitable tables, title names, column names and more. I will also account for the time slots and days that the surgeries are open.

Main body

When you think of a doctors, dentist or somewhere to book a holiday. You need to think how it works and where the information is all stored. In the real world with technology advancing faster than ever, databases track all information that businesses and a single person may need to keep. For this I will be needing to create the database for The Smile Factory to have a way for the patients, employees, billing information and appoints to all be record and tracked for references and organisation purposes.

Tables	
	Appointment
	Employees
	Patients
	Rooms
	Surgery Schedule

Here you can see me breaking down the suitable tables I have within my Smile Factory Database design. I have started with four tables and narrowed down into Employees to display more suitable fields for the employees' information to stay documented.

MainMenu Appointment Employees								
E_Id	FirstName	LastName	Address	PostCode	HomeNumber	PhoneNumber	Email	BirthDate
1	John	Swagger	Parklane, porkland street	SA55 8TR	01239281444		dentistJohn@dentist.com	07/01/1982
2	Philip	Warrender	RooftopRoad, downtown	TR74 2SD	01239282714	58669582924	Phil.ins@dentist.com	14/06/1975
3	Alisha	Frank	BallDownlane, redcross street	IV23 5RX	01236943828	21359299145	Alisha1991@dentist.com	16/03/1986
4	Emma	Anderson	Stickdrum lane, bright street	OR72 1NK	01248121958	12959285977	EmmaAnder@dentist.com	22/11/1985
5	Chris	Smith	PicknickRoad, bright street	JY66 4BC	01248121475	12831248955	Willsonemail@dentist.com	01/04/1990

Foreign keys shall be made to relate specified data together so that entities such as Patient and Employee can know what room they are in and what employee will be dealing with what patient.

Example of a foreign key (FK) would be that the schedule will be a unique key with the employees, room and the patients as they are all required to make up a schedule. If not both entities would not know where to go or what time to arrive.

Tables relate together correctly, as in order to make an appointment you are required to know the time, date and room in which to attend for both the patient and employee. Without knowing this information the appointment can end up with the incorrect patient having the wrong surgery undergoing. Making sure that tables have appropriate names is essential simply because when users are looking at the information presented in front of them they would need to know what is going on and I can do this but labelling the information with a header for the fields.

The design meets the user's requirements as it holds a field for the job role, has the employee's information and the employees are assigned a label (number) to distinguish who is who and who needs to perform what on who. This

design is simple and can easily be expanded on with more personal information if required. The simplicity of the design can allow any user to tap into the database and add in appointments, a new upcoming patient and possibly new employees.

DATABASE & SQL

Here you can see me using SQL to create tables for the Patients, Employees, Appointments and Payment.

PatientSQL Patients <pre> CREATE TABLE Patients (P_Id int NOT NULL PRIMARY KEY, FirstName varchar(26), LastName varchar(26), Address varchar(255), PostCode varchar(8), HomeNumber varchar(11), PhoneNumber varchar(11), Email varchar(30)) </pre>	Employees EmployeeSQL <pre> CREATE TABLE Employees (E_Id int NOT NULL PRIMARY KEY, FirstName varchar(26), LastName varchar(26), Address varchar(255), PostCode varchar(8), HomeNumber varchar(11), PhoneNumber varchar(11), Email varchar(30)) </pre>
PaymentSQL Payment <pre> CREATE TABLE Payment (Bill_Id int NOT NULL PRIMARY KEY, Bill_date date, Bill_Amount float, Bill_Method varchar(255), Bill_Address varchar(255)) </pre>	AppointmentSQL Appointment <pre> CREATE TABLE Appointment (A_Id int NOT NULL PRIMARY KEY, Ap_Date date, Ap_Time Time, Diagnosis varchar(255), Notes varchar(255)) </pre>

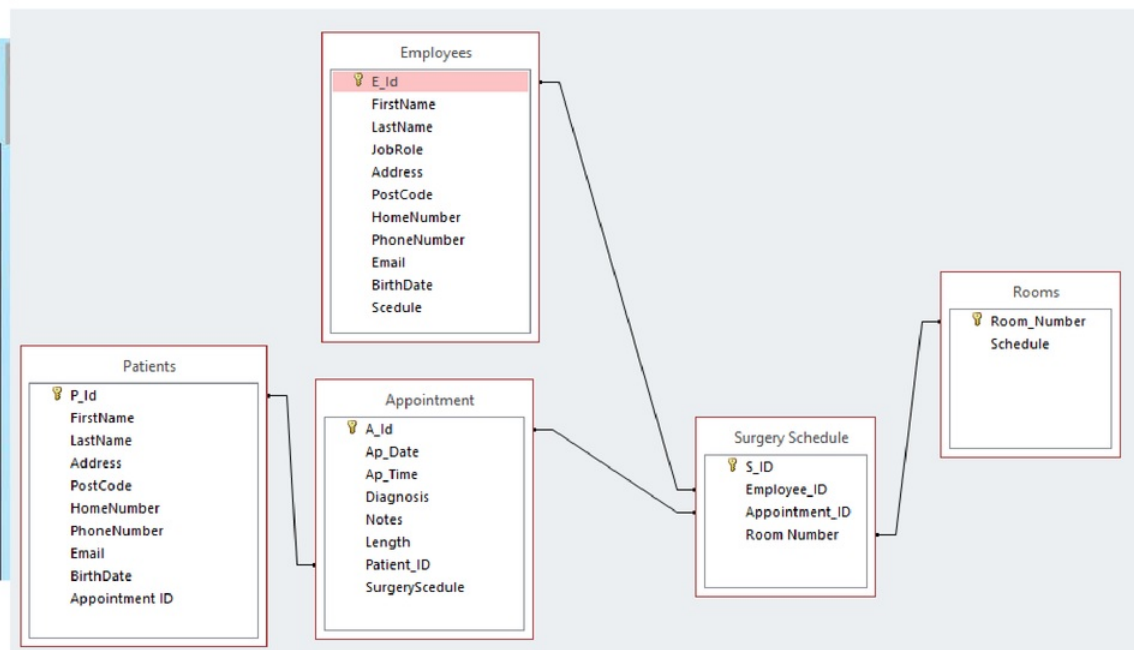
After inputting the tables using SQL, I had then went into design view to change some small features such as time slots to allow for a user friendly and selective time slot for the booking of the appointments. Many adjustments were made to improve the tables and allow for a clean drop down selection to reduce the time taken to input data.

Below is a screen grab of me using SQL to input some information to the fields within tables. Here I am using the table patients to input their information and set it as the patient id "1".

Employees Patients Query1 <pre> INSERT INTO Patients VALUES (1, "Jack", "Partridge", "DownRoad, upland street", "SA66 4SB", "01239876892", "21329034293", "jack.partridge@test.com"); </pre>

Whilst making the forms I had to keep user friendly in mind in order for the user to input, modify or manipulate data within the table as easy as possible. They have macro buttons on the bottom to navigate around the data and macros to modify or erase if need be.

This screen grab is of the relationship going on between the tables inside access itself. This shows what information is needed from what table in order to work together and help when arranging appointments or doing searches for particular information within the database.



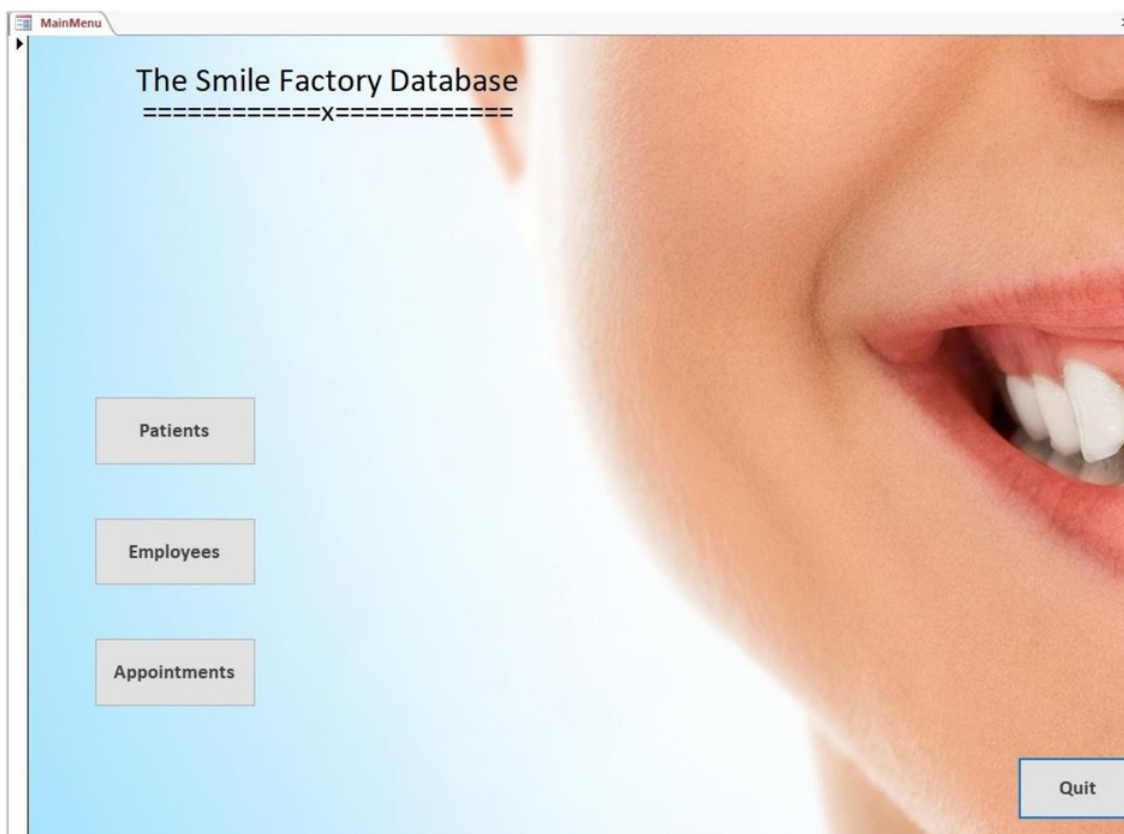
E_Id	P_Id	FirstName	LastName	Ap_Date	Ap_Time	Room_Number	Notes
4	2	Ally	Smith	01/05/2018	8:30am	A1	
12	1	Jack	Partridge	01/05/2018	8:45am	A3	30 minute filling

E_Id	FirstName	LastName	JobRole	Address	PostCode	HomeNumber	PhoneNumber	Email
1	John	Swagger	Dentist	Parklane, porkland street	SA55 8TR	01239281444	89219318284	dentistjohn@dentist.com
2	Philip	Warrender	Dental Hygienist	RoofTopRoad, downtown	TR74 2SD	01239282714	58669582924	Phil.Lins@dentist.com
3	Alisha	Frank	Dental Hygienist	BallDownlane, redcross street	IV23 5RX	01236943828	21359299145	Alisha1991@dentist.com
4	Emma	Anderson	Dentist	Stickdrum lane, bright street	OR72 1NK	01248121958	12959285977	EmmaAnder@dentist.com
5	Chris	Smith	Dentist	PicknickRoad, bright street	JY66 4BC	01248121475	12831248955	Willsonemail@dentist.com
6	Hannah	Williams	Dental Nurse	Greengrass, tavern street	LP24 2SF	01458295886	21248496042	HanSmith@dentist.com
7	Kasha	Probert	Dental Nurse	waterbridge road, st marrys	LF85 6JK	01248928459	12938129384	KashProbert90@dentist.com
8	Amy	Pearce	Dentist	DeepSeaRoad, Blackpool	RU34 5DF	01239172381	21382148421	AmyPearce@dentist.com
9	Caitlin	Williams	Dental Nurse	LollyLane, SaltSea street	UR21 1TH	01234847247	11239494858	CaitlinWill@dentist.com
10	Pearl	Mumford	Dental Nurse	RoundRoad, Pleasant street	HN67 8AT	01238428734	58283291238	P.Mumford@dentist.com
11	Roy	Dunlop	Dental Nurse	sandyPearl, King street	XC26 5HN	01239213781	49283184594	Roy.Dunlop@dentist.com
12	Robert	Grant	Dental Nurse	Almur Road, Peascod street	BN77 5FR	01239421741	21378214875	Robert.Grant@dentist.com

When doing the reports I had made queries so that I can show reports on what information I am presenting. I started off by doing a query of appointment times but since I only had two appointments in my test data it didn't get very far so I had chosen to narrow it down and go for a bigger search hand arrange it in id order.

Below is showing the reports I have narrowed down from showing the employees within the database.

Employees report (ascending)								
11 May 2018 22:22:58								
E_Id	FirstName	LastName	JobRole	Address	PostCode	HomeNumber	PhoneNumber	Email
1	John	Swagger	Dentist	Parklane, porkland street	SA55 8TR	01239281444	89219318284	dentistJohn@dentist.com
2	Philip	Warrender	Dental Hygienist	RooftopRoad, downtown	TR74 2SD	01239282714	58669582924	Phil.ins@dentist.com
3	Alisha	Frank	Dental Hygienist	BallDownlane, redcross street	IY23 5RX	01236943828	21359299145	Alisha1991@dentist.com
4	Emma	Anderson	Dentist	Stickdrum lane, bright street	OR72 1NK	01248121958	12959285977	EmmaAnder@dentist.com
5	Chris	Smith	Dentist	PicknickRoad, bright street	JY66 4BC	01248121475	12831248955	Willsonemail@dentist.com
6	Hannah	Williams	Dental Nurse	Greengrass, tavern street	LP24 2SF	01458295886	21248496042	HanSmith@dentist.com
7	Kasha	Probert	Dental Nurse	waterbridge road, st marrys	LF85 6JK	01248928459	12938129384	KashProbert90@dentist.com
8	Amy	Pearce	Dentist	DeepSeaRoad, Blackpool	RU34 5DF	01239172381	21382148421	AmyPearce@dentist.com
9	Caitlin	Williams	Dental Nurse	LollyLane, SaltSea street	UR21 1TH	01234847247	11239494858	CaitlinWill@dentist.com
10	Pearl	Mumford	Dental Nurse	RoundRoad, Pleasant street	HN67 8AT	01238428734	58283291238	P.Mumford@dentist.com
11	Roy	Dunlop	Dental Nurse	sandyPearl, King street	XC26 5HN	01239213781	49283184594	Roy.Dunlop@dentist.com
12	Robert	Grant	Dental Nurse	Almur Road, Peascod street	BN77 5FR	01239421741	21378214875	Robert.Grant@dentist.com



As for the menu, I had chosen a clean background to show what it is the smile factory do. This makes it look friendly when users approach the database the buttons are to show the patients, employees and appointments. The simple grey colour for the buttons make it easy to spot and cannot be missed with the light blue background.

Conclusion

Overall, I had designed a suitable database for "The Smile Factory" that is user friendly. It has many macros suitable for the tasks required such as edit the tables, delete data within the tables and create new ones. With this, I had allowed the users to go through the tables to see what Appointments they have, the employees they have and the patients. After making the ERD within Visio, it gave me a foundation on which to take my database and showed on which parts can be added to allow for a more successful database in the future.

Within this report and during the building process I had learned a lot on databases but feel there is a lot that can be done to further improve it.

Appendix

<https://i.stack.imgur.com/DIO83.png>

<https://www.databasehomeworkhelp.com/wp-content/uploads/2014/02/normal2.png>

<https://support.office.com/en-ie/article/introduction-to-access-sql-d5f21d10-cd73-4507-925e-bb26e377fe7e>

The Smile Factory ERD



Jack Partridge-Database Report

GRADEMARK REPORT

FINAL GRADE

GENERAL COMMENTS

53/100

Instructor

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