*Updated tables and queries

Database Project Proposal Phase 1

This database will be used in a small outpatient clinical setting. The clinic will need to store information about the patients, receptionists, doctors, nurses, and furthermore keep track of inventory, appointments, and medical records. This data is vital to the hospital as it keeps everything organized, structured, and accessible. For example, if a patient needs to view their medical history for any particular reason, they should be able to easily access it. The doctor should also be able to access the same records so he can treat his patients accordingly.

A medical record is a complete record of a patient's key clinical data and medical history, such as vital signs, demographics, diagnoses, medications, treatment plans, progress notes, problems, immunization dates, allergies, radiology images, and laboratory and test results.

Inventory will cover personal protective equipment and medication, both over the counter supplies and prescriptions. The purpose of keeping track of this material is so that the doctor when prescribing something to their patient can know whether they are able to pick up their medication in their clinic or need to go to another pharmacy. It also allows the patients to be able to order their medication and refills when quantities are available. Personal protective equipment (PPE) such as masks and gloves are vital to running a hospital in current times with the covid-19 virus spreading. The receptionist will be able to keep track of these supplies.

Appointment information will be kept in the database to allow the patients and doctors to keep track of their schedules. They as well as the receptionist will be allowed to create and alter appointments as they need.

Receptionists will use the database to update and access all appointments for patients, keep track of the PPE and the Medication inventories.

Doctors will be able to update and access their patients' medical records and well as be able to access the pharmacy's inventory.

Patients will have access to their own medical records, they will be able to create and view their appointments with their doctors. Patients will be admitted to a room where the availability status updates dynamically.

Entity Sets
- Physician
- Dept
- Patients
- Employees
- Receptionist
- Appointments
- Medication
- Medical Records
- Tests
- Nurse
- Room
- Inventory

Operations to be performed to maintain database
-Update Patient complaints

20 queries
1. How many doctors specialize in heart surgery?
2. Display all the appointments scheduled for this month?
3. What medications were prescribed to Nathaniel?

4. Display all the email addresses for doctors at the hospital

5. How many masks do we have in inventory?

6. Display the medical record for all the patients with last names that start with S.

7. Display all the receptionists' names at the hospital.

8. How many patients have pre existing conditions?

9. How many patients are prescribed Ibuprofen

10. How many patients were born from 2000 to 2009

11. Which doctors are male

12. What is the TestID for the Diagnostic Test

13. What nurse is available in the Pediatrics Department

14. Display the room no. that is currently occupied?

15. What medications are currently available?

16. How many beds are available?

17. How many appointments are delayed for August 2020

18. Display all the physicians dept_Id's.

19. What day does Doe last access her Medical Records?

20. Display all employees that are physicians

Sample Data

Dept

department_id	department_name
01	Administration

02	Cardiology
03	Primary Care
04	Pediatrics
05	Nephrology

Employees					
emp_Id	**firstName**	**lastName**	**email_address**	**Gender**	**Employee_type**
823-657	Billy	Joel	apple2@gmail.com	M	Receptionist
763-901	Jane	Doe	superman@aol.com	F	Physician
618-093	Jackie	Smith	js12@gmail.com	F	Nurse
654-321	Jake	Peralta	jake@gmail.com	M	Receptionist
123-456	Abe	Lincoln	alincoln@vcu.edu	M	Physician

Nurse		
department_name	**first_name**	**last_name**
Pediatrics	Jackie	Smith

Physician			
emp_id	**department_name**	**first_name**	**last_name**

763901	Cardiology	Jane	Doe
123456	Primary Care	Abe	Lincoln

Appointments		
Dates	**<u>Appt_Id</u>**	**Status**
6/01/2020	23612	Completed
7/26/2020	26789	Ongoing
8/1/2020	01296	Delayed
8/13/2020	13530	Unconfirmed

Receptionist		
<u>Appt_ID</u>	**last_name**	**department_name**
23612	Joel	Administration
26789	Peralta	Administration
01296	Joel	Administration
13530	Peralta	Administration

Medical Record			
patient_id	**<u>Record_Id</u>**	**Pre_Existing_Con**	**Access_Date**
173293	02345	Diabetes	5/3/2020
128312	02567	ADHD	7/4/2020
672081	02892	Depression	7/9/2020
219903	02334	High Blood Pressure	8/2/2020

Medication

Med_ID	Quantity	Prescription
53	100	Metoprolol
22	25	Ibuprofen
21	78	Hydrocortisone
32	0	Cetirizine

Tests

test_ID	Test
20	EchoCardiogram
21	CT Scan
22	Diagnostic Test
30	Blood count lab test

Patients

Patient_ID	patient_name	D_O_B	Gender	Room_Number	complaint	emp_id	med_id	tests_id
173-293	Mahir	6/01/1990	M	201	High Blood Pressure	763901	53	20
128-312	Tracy	7/6/1970	F	202	Dizziness	763901	22	21
672-081	Stephanie	8/1/2006	F	205	Skin rash	123456	21	22
219-903	Nathaniel	8/3/2000	mMale	206	Allergies	123456	32	30

Room			
Room-no	**Dept_name**	**num_beds**	**status**
201	Cardiology	2	available
202	Primary Care	1	occupied
205	Pediatrics	1	occupied
206	Primary Care	1	Available

Inventory (Personal Protective Equipment)	
masks	**Gloves (pairs)**
53	23

E-R Diagram

-Patients Schedule Appointments which are managed by Receptionist

-Receptionists can access room numbers

-Physicians and nurses are able to access all appointments

-Patients are able to access only their Appointment, medical record

-Receptionist, physician and nurse belong to Employees

-Physicians and nurse are able to update inventory

-Physicians consult patients and are able to prescribes medication and test

-Medical records store data from medication and test