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CPS510-082
GROUP 81

TMU clinic database.

Our group chose to do the medical clinic information database system. We chose this one because we thought it would be the most interesting from a database perspective and also be a challenge.

We are currently using 6 schemas, with almost all of them linking together, and have the possibility to be expanded for future use.

STAFF SCHEMA

The staff schema is made for the clinics staff database, and contains all basic employee information along with medical providers id. Note this schema is not exclusively for medical providers, and also encompasses staff from other departments (IT, nurses, janitors). The employee numbers and medical_provider_id would be the main entities that link this schema to the other schemas.

staff

employee_number	medical_provider_id	First_Name	Last_Name	Department	DOB	email	phone_number	SIN	address	Educational_qualifications	hiring_date
1234567	4323657	ben	doan	Pediatrics	October 31, 2002	hello@ryerson.ca	6477889999	123456789	1191 bay street	Harvard Collage Med School	October 1, 1990
4323657	1234567	jon	doe	neurology	January 16, 1987	jd87@msn.com	4168291736	234861232	64 that street	McGill Med School	July 12, 1970
9235631	1122222	jane	thompson	Optometry	May 5, 2000	jane.t20@gmail.com	6475558888	543787123	99 middlefield road	McMaster University	June 12, 2019
8716412		ppof	janes	IT	October 12, 1950	agdigwui@gmail.com	1234567777	987652131	1800 money man road		September 9, 2022

PATIENTS SCHEMA

The patients schema contains the general and contact information of a patient. Each patient is uniquely identified by a patient_id which would be used to interact with other tables. An example of its use is in the patient medical health information shema below.

patients

patient_id	First_Name	Last_Name	Gender	DOB	address	email	phone_number	emergency_contact_name	emergency_contact_relation	emergency_contact_phone_number
1A890ZD	tuky	tuky	male	August 17, 1992	72 gerrard street	tuky17@gmail.com	6479936823	cooper lober	mother	8912348815
1B983LN	John	Chen	female	October 1, 2002	2900 Jane Street	oogabooga@rogers.ca	4377048815	jinx vi	father	9997776666
1D853KM	Kate	Mons	female	July 18, 1999	592 Markham Road	511624@hotmail.com	6470118649	tracer winston	mother	7776662222
1B977MN	maggie	lam	male	June 1, 2005	999 driftwood, avenue	iahsdaw@gmail.com	1234568888	oopsie daisy	father	9998887777

PATIENT MEDICAL HEALTH INFORMATION SCHEMA

The patient medical health information schema describes a patient's (identified by their ID) current medical condition which is kept separate from the patients schema. It also links the patient with their doctor/medical staff. This allows us to ensure security and privacy of the patients, as well as how we keep certain system interactions separate.

patient medical health information

patient_id	medical_provider_id	OHIP_number	previous_appointment_date	notes	current_medication
1A890ZD	4323657	1374288735PJ		has seizures bi-weekly	codine
1B983LN	1234567	1234567899LN	August 2, 2022	missing limb, and phantom pain	fentanyl
1D853KM	1122222	8695038534CG	October 1, 1972	frequent drug user	advil
1B977MN	4323657	9876543210WQ	June 1, 2005	addicted to games	tylenol

EMPLOYEE AVAILABILITY SCHEMA

This schema keeps track of when the employees are available. Using each unique employee id as a tag to search for the specific staff member, the availability can be kept track of and there would be no confusion as all ids are unique. This key would be able to help the user communicate between the employee schema and the availability schema as they share the same attribute.

employee_availability

employee_number	available_sick_days	available_PTO_days	weekly_available_days	specified_days_unavailable	notes
1234567	12	30	monday, tuesday, wednesday, friday	October 12, 2025	available from 8:00-17:00 all days
4323657	13	40	saturday, sunday, monday, thursday, friday	November 12, 2022	available from 8:00-17:00 all days
9235631	10	27	sunday, monday, tuesday	September 20, 2022	available from 8:00-17:00 all days

APPOINTMENTS SCHEMA

The appointments schema would be used to keep track of the appointments booked by patients. The patient id and the employee id would be used to keep track of which patient is seeing which doctor. Using this id, patients or doctors with same names would not be mixed up with one another as that would cause confusion and may lead to medical mishaps.

appointments

patient_id	employee_id	appointment_creation_date	appointment_date	Time	appointment_reason
1A890ZD	1234567	October 1, 2022	October 1, 2023	15:00	suspected cancer
1B983LN	4323657	July 12, 2022	November 1, 2022	14:30	suspected missing limb
1D853KM	9235631	April 17, 2020	January 7, 2023	12:15	therapy

SUPPLIES SCHEMA

The supplies schema would be used by the clinic to keep track of all current supplies, where they are located, supplier information, etc… This is essential and useful for a medical clinics database, as it helps them stay organized and know when they need to order more. Most of the data is changable entities, and only the item_id, supplier, and item would stay as a fixed entity.

supplies

item_id	item	quantity	supplier	date of expiry	date recieved	storage_location
RYE01GZ	gauze	12	Ryerson Ltd.	September 24, 2023	July 30, 2022	MAIN_STORAGE
APPL07SYR	syringes	44	Apple Inc.	October 1, 2022	June 3, 2022	SUB_STORAGE1
RYE02RALCH	rubbing alcohol	7	Ryerson Ltd.	August 3, 2023	September 1, 2022	MAIN_STORAGE
RYE07BAND	bandaids	157	Ryerson Ltd.	June 20, 2025	December 7, 1970	MAIN_STORAGE
SMSNG09SWAB	swabs	289	Samsung Co.	June 20, 2027	January 1, 2019	SUB_STORAGE2
SAM81RALCH	rubbing alcohol	139	Samsung Co.	September 27, 2025	December 7, 1970	SUB_STORAGE2
RYE12COTBLL	cotton balls	54721	Ryerson Ltd.	October 1, 2029	June 12, 2000	MAIN_STORAGE