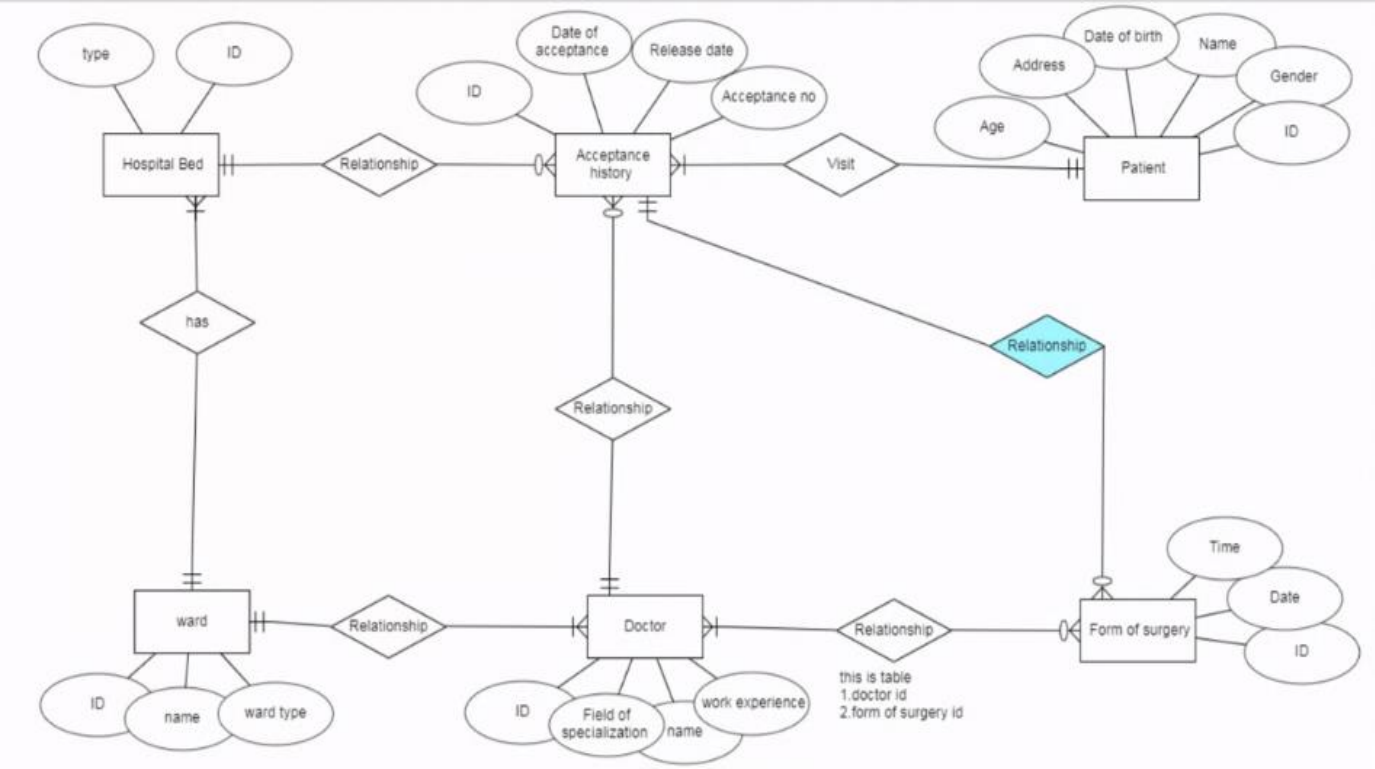
Hospital Data Base:



Create tables:

- create table patient (patient_id serial primary key, name varchar(150) not null,gender varchar(8), age int, address varchar(500), date_of_birth date);
  alter table patient add column last_name varchar(50);
- create table section (section_id serial primary key, section_name varchar(100) not null, section_type varchar(100));
- create table bed (bed_id serial primary key, bed_type varchar(50),sec_id int, foreign key(sec_id) references section(section_id));
- create table acception_history(history_id serial primary key, accept_date date, rlease_date date,pati_id int, foreign key(pati_id) references patient(patient_id),b_id int, foreign key(b_id) references bed(bed_id));
- create table surgery (surgery_id serial primary key, duration int, surgery_date date, ac_his_id int, foreign key(ac_his_id)references acception_history(history_id));

- create table doctor (dr_id serial primary key,name varchar(200), field varchar(150), experience_duration int , sect_id int, foreign key(sect_id) references section(section_id)); alter table doctor add column dr_last_name varchar(50);

- create table surgery_dr(doctor_id int , surg_id int, payment int , dr_duration_in_surg int, foreign key(doctor_id) references doctor(dr_id), foreign key(surg_id) references surgery(surgery_id));

Tables with data:

Patient:

Data Output | Explain | Messages | Notifications

	patient_id [PK] integer	name character varying (150)	gender character varying (8)	age integer	address character varying (500)	date_of_birth date	last_name character varying (50)
1	1	Ali	M	19	Tehran	2002-12-10	Amiri
2	2	Zahra	F	26	Tehran	1995-05-05	Anvari
3	3	Ali	M	24	[null]	1997-06-08	Hatami
4	4	Melika	F	20	[null]	2001-11-10	Rajabi
5	5	Nazanin	F	28	[null]	1993-05-06	Rahmani
6	6	Mahdi	M	36	[null]	1985-10-24	Mohebi
7	7	Nazi	F	16	[null]	2005-10-10	Ahmadi
8	8	Ahmad	M	63	[null]	1958-10-14	Mohamadi

Section:

Data Output | Explain | Messages | Notifications

	section_id [PK] integer	section_name character varying (100)	section_type character varying (100)
1	1	emergency	emergency
2	2	cardiology	heart
3	3	haematology	blood
4	4	nephrology	kidney
5	5	oncology	cancer
6	6	gynecology	for women
7	7	CCU	CCU

Bed:

Data Output | Explain | Messages | Notifications

	bed_id [PK] integer	bed_type character varying (50)	sec_id integer
1	1	simple	1
2	2	simple	1
3	3	electronical	1
4	4	electronical	1
5	5	electronical	1
6	6	simple	2
7	7	simple	2
8	8	electronical	2
9	9	electronical	2
10	10	electronical	2
11	11	simple	3
12	12	simple	3
13	13	electronical	3
14	14	electronical	3
15	15	electronical	3
16	16	simple	4
17	17	simple	4
18	18	electronical	4
19	19	electronical	4
20	20	electronical	4
20	20	electronical	4
21	21	simple	5
22	22	simple	5
23	23	electronical	5
24	24	electronical	5
25	25	electronical	5
26	26	simple	6
27	27	electronical	6
28	28	simple	7
29	29	simple	7
30	30	electronical	7
31	31	electronical	7
32	32	electronical	7

Acception_history:

public.acception_history/hospital/postgres@PostgreSQL 13

Data Output | Explain | Messages | Notifications

	history_id [PK] integer	accept_date date	rlease_date date	pati_id integer	b_id integer
1	1	2021-02-10	2021-02-12	1	12
2	2	2020-10-10	2020-11-10	2	13
3	3	2020-12-12	2021-02-10	3	7
4	4	2020-12-10	2020-12-15	4	27
5	5	2021-01-02	2021-02-05	5	30
6	6	2020-10-05	2020-12-10	6	18
7	7	2020-06-05	2021-02-10	7	22
8	8	2021-01-06	2021-01-08	8	2

Doctor:

public.doctor/hospital/postgres@PostgreSQL 13

Data Output | Explain | Messages | Notifications

	dr_id [PK] integer	name character varying (200)	field character varying (150)	experience_duration integer	sect_id integer	dr_last_name character varying (50)
1	1	Zahra	emergency	10	1	Tabibzadeh
2	2	Ali	heart	15	2	Rezaee
3	3	Afshin	blood	8	3	Rostami
4	4	Zeynab	women	5	6	Safary
5	5	Ali	CCU	10	7	Mohseni
6	6	Nazanin	kidney	12	4	Rajabi
7	7	Alireza	cancer	13	5	Bajelan

Surgery:

public.surgery/hospital/postgres@PostgreSQL 13

Data Output | Explain | Messages | Notifications

	surgery_id [PK] integer	duration integer	surgery_date date	ac_his_id integer
1	1	5	2020-07-06	7
2	2	7	2020-12-15	3
3	3	3	2020-12-11	4
4	4	4	2020-11-10	6
5	5	2	2020-08-09	7

Doctor_surgery:

public.surgery_dr/hospital/postgres@PostgreSQL 13

Data Output | Explain | Messages | Notifications

	doctor_id integer	surg_id integer	payment integer	dr_duration_in_surg integer
1	7	1	1500	4
2	3	1	1500	1
3	2	2	4500	7
4	4	3	2600	3
5	6	4	3200	4
6	2	5	1200	2
7	3	5	600	2

Queries:

- select max(age) from patient; to return the max age of patients
- select min(age) from patient; to return the min age of patients
- select avg(age) from patient; to return the average age of patients

- select dr_last_name, bed_id, section_name from (select * from patient inner join acception_history on patient.patient_id = acception_history.pati_id inner join bed on bed.bed_id= acception_history.b_id inner join section on bed.sec_id =section.section_id inner join doctor on doctor.sect_id=section.section_id) as q2 where last_name='Ahmadi' and accept_date='2020-06-05';
  to return the name of the doctor and section name of a patient

- select section_name, count(bed_type ='electronical') from bed inner join section on bed.sec_id=section.section_id group by section_name;
  to return the number of beds in every sections

- select sum(dr_duration_in_surg) from(select * from doctor inner join surgery_dr on doctor.dr_id= surgery_dr.doctor_id inner join surgery on surgery.surgery_id = surgery_dr.surg_id)as q4 where dr_last_name='Rezaee' and surgery_date='2020-08-09';
  to return the summation of hours that a doctor was in a surgery in a specific date
- select dr_last_name, sum(dr_duration_in_surg) from(select * from doctor inner join surgery_dr on doctor.dr_id= surgery_dr.doctor_id inner join surgery on surgery.surgery_id = surgery_dr.surg_id)as q5 where experience_duration >=10 group by dr_last_name ;
  to return the summation of hours that every doctors with more than 10 years experience was in a surgery

- select dr_last_name ,surg_id from(select * from patient inner join acception_history on patient.patient_id=acception_history.pati_id inner join surgery on surgery.ac_his_id = acception_history.history_id inner join surgery_dr on surgery_dr.surg_id=surgery.surgery_id inner join doctor on doctor.dr_id = surgery_dr.doctor_id) as q6 where last_name='Ahmadi' ;
  to return the name of doctors in a specific surgery

- select count(ac_his_id) from (select * from surgery inner join surgery_dr on surgery_dr.surg_id=surgery.surgery_id inner join doctor on doctor.dr_id=surgery_dr.doctor_id) as q7 where field='heart';
  to return the number of acceptions that needs heart surgery

- select count(patient_id) from (select * from patient inner join acception_history on patient.patient_id=acception_history.pati_id inner join surgery on surgery.ac_his_id = acception_history.history_id inner join surgery_dr on surgery_dr.surg_id=surgery.surgery_id inner join doctor on doctor.dr_id = surgery_dr.doctor_id) as q8 where field='heart';
  to return the number of patients that needs heart surgery