ATILIM ÜNİVERSİTESİ

HOSPITAL INFORMATION SYSTEM

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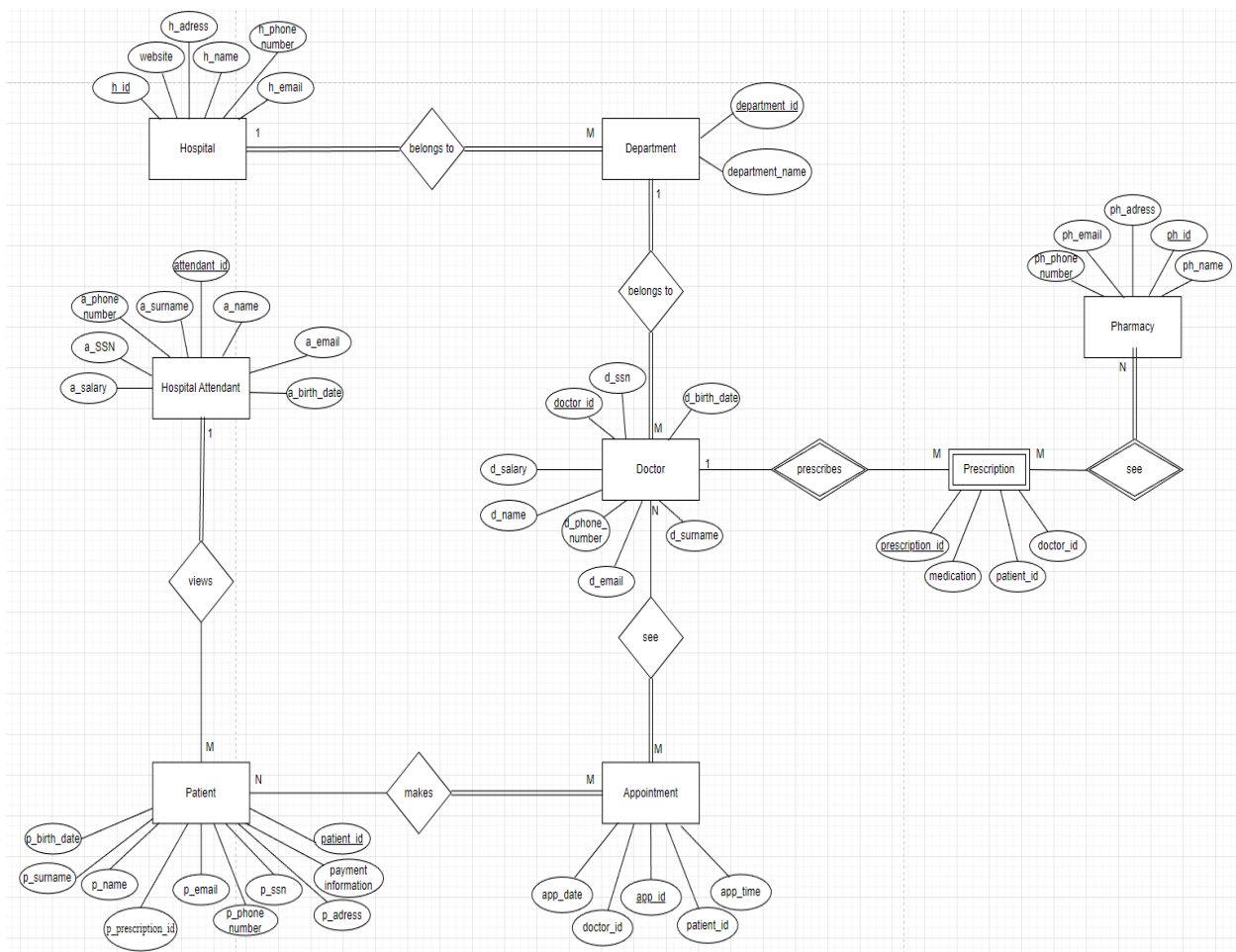
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I. INTRODUCTION

In Turkey, hospitals were recording the personal health information (x-rays results, analyzes, prescriptions, etc.) about the patients with the physical archiving method. In this physical archiving method, accessing the personal health information of the patients and adding new information to these archives made it difficult to control the archives. However, communication between doctors and pharmacies was also more difficult. With the development of technology, they decided to switch from this physical archiving method to the online archiving method. Because with the transition to the online archiving method, hospitals will be able to access the information in the archives more easily and store this information more securely.

II. REQUIREMENTS

- Doctors should be able to log in and log out of the database system.
- Doctors should be able to add new data about patients to the database system.
- Doctors should be able to view patients' historical data in the database system.
- The hospital attendant should be able to add new patients to the database system.
- The hospital attendant should be able to see the payment information of the patients through the database system.
- When the database system detects a patient aged 65 (Operation needed for giving priority) and over, this patient should be given priority in service.
- Pharmacies should be able to see the prescriptions given to the patients through their system from the database.
- The patient should be able to make an appointment before going to the hospital.
- Doctors have to renew their system login passwords every 6 months for security purposes.
- Hospital attendants are required to renew their system login passwords every 6 months for security purposes.
- Hospitals have their own name, unique addresses, unique phone numbers, unique e-mail addresses, and unique websites.
- Doctors have their own name, surname, date of birth, address, unique phone number, unique e-mail address, salary, department, unique ssn and unique doctor id.
- Hospital attendants have their own name, surname, date of birth, address, unique phone number, unique e-mail address, salary, the department they serve, unique ssn, and unique id.
- Patients have their own name, surname, date of birth (operation needed for calculating age), address, unique phone number, unique e-mail address, payment information(s), unique examination number, unique prescription number, and unique ssn.

- Pharmacies have their own names, unique addresses, unique phone numbers, and unique e-mail addresses.
- Appointment: Represents appointments made by patients with doctors. The attributes of this entity might include appointment ID, date, time, patient ID, doctor ID.

III. ER DIAGRAM

IV.LOGICAL DATA MODEL

Patient[patient_id, p_SSN, p_name, p_surname, p_email, p_birth_date, p_phone_number, payment_information, p_prescription_id, p_adress, app_id (FK refers to Appointment)]

Doctor[doctor_id, d_SSN, d_name, d_surname, d_phone _number, d_email, d_salary, d_birth_date, department_id (FK refers to Department)]

Department[department_id, department_name, h_id (FK refers to Hospital)]

Hospital_Attendant[attendant_id, a_SSN, a_name, a_surname, a_phone_number, a_email, a_birth_date, a_salary]

Hospital[h_id, h_name, h_address, h_email, website, h_phone_number]

Appointment[app_id, app_date, app_time, doctor_id(FK refers to Doctor), patient_id (FK refers to Patient)]

Prescription[prescription_id, patient_id (FK refers to Patient), doctor_id (FK refers to Doctor), medication]

Pharmacy[ph_id, ph_name, ph_address, ph_email, ph_phone_number]

Makes[patient_id(FK refers to Patient), app_id(FK refers to Appointment)]

See[app_id (FK refers to Appointment), doctor_id(FK refers to Doctor)]

V.NORMALIZATION

1) For patient entity:

P_id	P_SSN	P_name	p_email	P_birth date	P_phone_number	Payment information	P_prescription_id	P_adress	App_id
1	12345678952	Saime İpek İşçelebi	Iscelebi.ipek@gmail.com	29.06.2000	+905322501392	TR00 5623 5698 5478 5692	452	Ankara/Mamak	886, 741
2	56329874721	Furkan Babuccu	Furkan.babuccu@gmail.com	10.06.2001	+9005344433843	TR00 8563 7898 1352	453	Ankara/Etlik	452, 815
3	29395818960	Muhlis Erdem Yıldız	Muhliserdemyildi@gmail.co	02.07.2000	+9053483 16673	TR00 5623 2314 8958 5623	454	Ankara/Yenima halle	1001

It is NOT in 1NF, because NOT all attributes are ATOMIC. First of all, we need to make these values atomic to convert this table to 1NF.

It is in 1NF, because all attributes are atomic now.

P_id	P_SSN	P_name	p_email	P_birth date	P_phone_number	Payment information	P_prescription_id	P_adress	App_id
1	12345678952	Saime İpek İşçelebi	Iscelebi.ipek@gmail.com	29.06.2000	5322501392	TR00 5623 5698 5478 5692	452	Ankara/Mamak	886
1	12345678952	Saime İpek İşçelebi	Iscelebi.ipek@gmail.com	29.06.2000	5322501392	TR00 5623 5698 5478 5692	452	Ankara/Mamak	741
2	56329874721	Furkan Babuccu	Furkan.babuccu@gmail.com	10.06.2001	5453343223	TR00 8563 7898 1352 7632	453	Ankara/Etlik	452
2	56329874721	Furkan Babuccu	Furkan.babuccu@gmail.com	10.06.2001	5453343223	TR00 8563 7898 1352 7632	453	Ankara/Etlik	815
3	29395818960	Muhlis Erdem Yıldız	Muhliserdemyildi@gmail.co	02.07.2000	+905348316673	TR00 5623 2314 8958 5623	454	Ankara/Yenima halle	1001

FD1: P_id -> payment_information, p_name, p_email, p_phone_number, p_address

FD2: P_SSN-> p_name, p_age, p_birth_date

FD3: P_id, p_SSN -> app_id

But it is NOT in 2NF. Because there is partial dependency. We'll split them!!

Patient Hospital Information

P_id	Payment information	P_name	p_email	P_phone_number	P_adress
1	TR00 5623 5698 5478 5692	Saime İpek İşçelebi	Iscelebi.ipek@gmail.com	5322501392	Ankara/Mamak
1	TR00 5623 5698 5478 5692	Saime İpek İşçelebi	Iscelebi.ipek@gmail.com	5322501392	Ankara/Mamak
2	TR00 8563 7898 1352 7632	Furkan Babuccu	Furkan.babuccu@gmail.com	5453343223	Ankara/Etlik
2	TR00 8563 7898 1352 7632	Furkan Babuccu	Furkan.babuccu@gmail.com	5453343223	Ankara/Etlik
3	TR00 5623 2314 8958 5623	Muhlis Erdem Yıldız	Muhliserdemyildi@gmail.com	05348316673	Ankara/Yenimahalle

P_id -> payment_information, p_name, p_email, p_phone_number, p_address

P1 is in 1NF, because all attributes are ATOMIC

P1 is in 2NF, because there is no PD

P1 is in 3NF, because there is no TD

Patient Personal Information

P_SSN	p_name	p_age	p_birth_date
12345678952	Saime İpek İşçelebi	22	29.06.2000
12345678952	Saime İpek İşçelebi	22	29.06.2000
56329874721	Furkan Babuccu	21	10.06.2001
56329874721	Furkan Babuccu	21	10.06.2001
29395818960	Muhlis Erdem Yıldız	22	2.07.2000

P_SSN-> p_name, p_age, p_birth_date

P2 is in 1NF, because all attributes are ATOMIC

P2 is in 2NF, because there is no PD

P2 is in 3NF, because there is no TD

Patient Appointment

P_id	p_SSN	app_id
1	12345678952	886
1	12345678952	741
2	56329874721	452
2	56329874721	815
3	29395818960	1001

P_id, p_SSN -> app_id

P3 is in 1NF, because all attributes are ATOMIC

P3 is in 2NF, because there is no PD

P3 is in 3NF, because there is no TD

2)For doctor entity:

There are atomic values so it is in already 1NF.

FD1: doctor_id -> department_id, , d_name, d_email, d_phone_number, d_address, d_salary

FD2: d_SSN-> d_name, d_age, d_birth_date

But it is NOT in 2NF. Because there is partial dependency. We'll split them!!

D_id -> department_id, d_name, d_email, d_phone, d_address, d_salary

D1 is in 1NF, because all attributes are ATOMIC

D1 is in 2NF, because there is no PD

D1 is in 3NF, because there is no TD

Doctor Hospital Information

Doctor_id	departmant_id	d_name	d_email	d_phone	d_adress	d_salary
4384934328	332444334	Salih Yıldız	salihyildiz@gmail.com	5358763454	Ankara/İncek	32500
4384934328	332444334	Hümeyra Gülşen	hümeyragülsen@gmail.com	5066725645	Ankara/Dikmen	32500
7676574315	598345891	Ecem Senay	ecemsenay@gmail.com	5368762134	Ankara/İncek	28500
7676574315	983182053	Yunus Çetin	yunuscetin@gmail.com	5323432432	Ankara/Keçiören	40500
5849033289	123769481	Damla Toplallı	damlatopalli@gmail.com	5324654234	Ankara/Batıkent	42300

D_SSN-> D_name, D_age, D_birth_date

D2 is in 1NF, because all attributes are ATOMIC

D2 is in 2NF, because there is no PD

D2 is in 3NF, because there is no TD

Doctor Information

D_SSN	D_name	D_age	D_birth_date
12994587111	Salih Yıldız	54	29.06.1946
17894845511	Hümeyra Gülşen	60	10.06.1942
79429874721	Ecem Senay	27	25.10.1975
19243610001	Yunus Çetin	34	10.06.1968
21244710040	Damla Topallı	25	10.06.1977

VI. PHYSICAL DESIGN USING SQL

Create table **Patient_Hospital_Information** (

patient_id int primary key,

payment_information varchar(24),

p_name varchar(20),

p_surname varchar(20),

p_email varchar(40),

p_birth_date varchar(10),

p_phone_number varchar(10),

p_address varchar(50)

 );

Insert into Patient_Hospital_Information values(1,'TR00 5623 5698 5478 5692','Saime İpek',' İşçelebi','Iscelebi.ipek@gmail.com','21/02/1998','5322501392','Ankara/Mamak');

Insert into Patient_Hospital_Information values(2,'TR00 5623 5698 5498 1352 7632','Furkan',' Babuccu','Furkan.babuccu@gmail.com','16/11/1999,'5453343223','Ankara/Etlik');

Insert into Patient_Hospital_Information values(3,'TR00 5623 2314 8958 5623','Muhlis Erdem',' Yıldız','Muhliserdem.yildiz@gmail.com','16/11/1999,'5453343223','Ankara/Etlik');

Insert into Patient_Hospital_Information values(4,'TR00 3423 4355 8958 2365','Yusuf',' Demir','Yusuf.demir@gmail.com','11/01/2003,'54574783223','Ankara/İncek');

Insert into Patient_Hospital_Information values(5,'TR00 4323 4355 4353 5432','Adnan',' Kiraz','Adnan.kiraz@gmail.com','28/12/1984','5457759323','Ankara/Etlik');

Insert into Patient_Hospital_Information values (6, 'TR00 5623 1234 8958 7412', 'Ahmet', 'Kaya', 'Ahmet.kaya@gmail.com','10/07/2001, '5322501392', 'Ankara/Mamak');

Insert into Patient_Hospital_Information values (7, 'TR00 5623 1234 8758 6547', 'Mehmet', 'Çetin', 'Mehmet.cetin@gmail.com', '29/03/1999,'5322501393', 'Ankara/Çankaya');

Insert into Patient_Hospital_Information values (8, 'TR00 5623 1234 7547 8523', 'Emine', 'Aksoy', 'Emine.aksoy@gmail.com', '11/11/2011,'5322501394', 'Ankara/Yenimahalle');

Insert into Patient_Hospital_Information values (9, 'TR00 5623 1234 6547 9523', 'Ali', 'Öztürk', 'Ali.ozturk@gmail.com',’25/05/1995’, '5322501395', 'Ankara/Sincan');

Insert into Patient_Hospital_Information values (10, 'TR00 5623 1234 5547 6523', 'Fatma', 'Kara', 'Fatma.kara@gmail.com',’16/01/1991’ '5322501396', 'Ankara/Gölbaşı');

Create table **Patient_Personal_Information** (

p_SSN varchar(11),

p_name varchar(20),

P_surname varchar(20),

P_email varchar(40),

P_birth_date varchar(10)

 );

Insert into Patient_Personal_Information values(‘12345678952’,’Saime İpek’, ’İşçelebi’ ,’Iscelebi.ipek@gmail.com’, ‘21/02/1998’);

Insert into Patient_Personal_Information values(14725836978,’Furkan’,’ Babuccu’,’Furkan.babuccu@gmail.com’,’16/11/1999’);

Insert into Patient_Personal_Information values(14725836941,’Muhlis Erdem’,’ Yıldız’,’Muhliserdem.yildiz@gmail.com’,’16/11/1999’);

Insert into Patient_Personal_Information values(98765432145,’Yusuf’,’ Demir’,’Yusuf.demir@gmail.com’,’11/01/2003’);

Insert into Patient_Personal_Information values(29395818960, ‘Adnan’,’ Kiraz’,’Adnan.kiraz@gmail.com’,’ 28/12/1984’);

Insert into Patient_Personal_Information values (28457821154, 'Ahmet', 'Kaya', 'Ahmet.kaya@gmail.com', '10/07/2001');

Insert into Patient_Personal_Information values (19243610001, 'Mehmet', 'Çetin', 'Mehmet.cetin@gmail.com', '29/03/1999');

Insert into Patient_Personal_Information values (21244710040, 'Emine', 'Aksoy', 'Emine.aksoy@gmail.com', '11/11/2011');

Insert into Patient_Personal_Information values (19643212252, 'Ali', 'Öztürk', 'Ali.ozturk@gmail.com', '25/05/1995');

Insert into Patient_Personal_Information values (78541236901, 'Fatma', 'Kara', 'Fatma.kara@gmail.com', '16/01/1991');

Create table **Patient_Appointment**(

patient_id int primary key,

p_SSN varchar(11),

App_id int,

foreign key(app_id) references Appointment(app_id)

);

Insert into Patient_Appointment values (1, '12345678952', 886);

Insert into Patient_Appointment values (2, '14725836978', 741);

Insert into Patient_Appointment values (3, '14725836941', 452);

Insert into Patient_Appointment values (4, '98765432145', 815);

Insert into Patient_Appointment values (5, '29395818960',1001);

Insert into Patient_Appointment values (6, '28457821154',1020);

Insert into Patient_Appointment values (7, '19243610001',1568);

Insert into Patient_Appointment values (8, '21244710040',1849);

Insert into Patient_Appointment values (9, '19643212252',1789);

Insert into Patient_Appointment values (10, '78541236901',5842);

Create Table **Doctor_Hospital_Information**(

doctor_id int primary key,

department_id int,

Foreign key(department_id) references doctor_information (department_id),

d_name varchar(20),

d_surname varchar(20),

d_email varchar(50),

d_phone_number varchar(10),

d_adress varchar(50),

d_salary int

);

Insert into Doctor_Hospital_Information values(4384934328, '332444334', 'Salih', 'Yıldız', 'salih.yildiz@gmail.com', '5358763454', 'Ankara/İncek', 32500);

Insert into Doctor_Hospital_Information values(4384934343, '332444334', 'Hümeyra', 'Gülşen', 'hümeyragülsen@gmail.com', '5365368754', 'Ankara/Dikmen', 31500);

Insert into Doctor_Hospital_Information values(7676576858, '598345891', 'Ecem', 'Senay', 'ecemsenay@gmail.com', '5368762134', 'Ankara/İncek', 28500);

Insert into Doctor_Hospital_Information values(598345891, '983182053', 'Yunus', 'Çetin', 'yunus.cetin@gmail.com', '5323762432', 'Ankara/Keçiören', 40500);

Insert into Doctor_Hospital_Information values(598345891, '123769481', 'Damla', 'Topallı', 'damlatopalli@gmail.com', '5324568734', 'Ankara/Batıkent', 42500);

Insert into Doctor_Hospital_Information values(43243245, ' 5263251624', 'Buket', 'Kılıç', 'buketkilic@gmail.com', '5324667834', 'Ankara/Dikmen, 8500);

Insert into Doctor_Hospital_Information values(43243245, ' 2268632245', 'Enes', 'Duman', 'enesduman@gmail.com', '534768562', 'Ankara/Esertepe', 12500);

Insert into Doctor_Hospital_Information values(7654654456, ' 1237699481', 'Okan', 'Kurnaz', 'okan kurnaz@gmail.com', '5324435682', 'Ankara/Sincan', 30500);

Insert into Doctor_Hospital_Information values(6544455645, ' 7789564125', 'Ahmet', 'Şahin', 'ahmetsahin@gmail.com', '5434665211', 'Ankara/Batıkent', 24500);

Insert into Doctor_Hospital_Information values(89032432, ' 3154542678', 'Fatih', 'Terim', 'fatihterim@gmail.com', '5024654287', 'Ankara/Batıkent', 40500);

Create Table **Doctor_Information**(

d_ssn int primary key,

d_name varchar(20),

d_surname varchar(20),

d_age int,

d_ birth_date varchar(10)

);

Insert into Doctor_Information values (12994558111, 'Salih', 'Yıldız', 54, '29.06.1946');

Insert into Doctor_Information values (17894845511, 'Hümeyra', 'Gülşen', 60, '10.06.1942');

Insert into Doctor_Information values (79429874721, 'Ecem', 'Şenay', 27, '25.10.1975');

Insert into Doctor_Information values (19243610001, 'Yunus', 'Çetin', 34, '10.06.1968');

Insert into Doctor_Information values (21244710040, 'Damla', 'Topallı', 25, '10.06.1977');

Insert into Doctor_Information values (21244710040, 'Buket', 'Kılıç', 25, '24.09.1997');

Insert into Doctor_Information values (64954893383, 'Enes', 'Duman', 28, '11.01.1995');

Insert into Doctor_Information values (76457554663, 'Okan', 'Kurnaz', 35, '19.13.1991');

Insert into Doctor_Information values (76756654276, 'Ahmet', 'Şahin', 42, '20.12.1989');

Insert into Doctor_Information values (87645343326, 'Fatih', 'Terim', 24, '01.09.1999');

Create Table **Department**(

department_id int primary key,

department_name varchar(15),

H_id int,

Foreign key(h_id) references Hospital (h_id));

Insert into Department values (332444334, 'Cardiology', 1456);

Insert into Department values (598345891, 'Eye Diseases', 5567);

Insert into Department values (9831822053, 'Hematology', 2988);

Insert into Department values (1237699481, 'Neurology', 4465);

Insert into Department values (5698254674, 'Orthodontics', 6325);

Insert into Department values (5263251624, 'Cardiology', 4578);

Insert into Department values (2268632245, 'Urology', 6875);

Insert into Department values (1237699481, 'Neurology', 4468);

Insert into Department values (7789564125, 'Chest Diseases', 8541);

Insert into Department values (3154542678, 'Dentistry', 7362);

Create Table **Hospital_Attendant**(

attendant_id int primary key,

a_SSN varchar(11),

a_name varchar(20),

a_surname varchar(20),

a_phone_number varchar(10),

a_email varchar(50),

a_birthdate varchar(10),

a_salary int

);

Insert into Hospital_Attendant values (123, '56238956145', 'Aysel', 'Göktürk', '5322639584', 'aysel.gokturk@gmail.com', '29/12/1966', 9000);

Insert into Hospital_Attendant values (124, '56238956146', 'Mustafa', 'Yılmaz', '5322639585', 'mustafa.yilmaz@gmail.com', '29/12/1967', 8000);

Insert into Hospital_Attendant values((125, '56238956147', 'İsmail', 'Kaya', '5322639586', 'ismail.kaya@gmail.com', '29/12/1968', 7000);

Insert into Hospital_Attendant values (126, '56238956148', 'Fatma', 'Özdemir', '5322639587', 'fatma.ozdemir@gmail.com', '29/12/1969', 8100);

Insert into Hospital_Attendant values (127, '56238956149', 'Ahmet', 'Sarı', '5322639588', 'ahmet.sari@gmail.com', '29/12/1970', 5000);

Insert into Hospital_Attendant values (128, '56238956150', 'Mehmet', 'Kara', '5322639589', 'mehmet.kara@gmail.com', '29/12/1971', 7000);

Insert into Hospital_Attendant values (129, '56238956151', 'Emine', 'Çelik', '5322639590', 'emine.celik@gmail.com', '29/12/1972', 6500);

Insert into Hospital_Attendant values (130, '56238956152', 'Ali', 'Doğan', '5322639591', 'ali.dogan@gmail.com', '29/12/1973', 4000);

Insert into Hospital_Attendant values (131, '56238956153', 'Zeynep', 'Yıldız', '5322639592', 'zeynep.yildiz@gmail.com', '29/12/1974', 7000);

Insert into Hospital_Attendant values (132, '56238956155', 'Ayşe', 'İşçelebi', '5322639594', 'ayse.iscelebi@gmail.com', '29/12/1976', 7540);

Create Table **Hospital**(

h_id int primary key,

h_name varchar(20),

h_address varchar(50),

website varchar(20),

h_phone_number varchar(20)

);

Insert into Hospital values(1456, 'Aydogan Hospital', 'Kalaba, 06120 Keçiören/Ankara', 'aydogan@info.com.tr', 'www.aydoganhospital.com.tr' , '03123323232');

Insert into Hospital values (5567, 'Memorial Hospital', 'Downtown, 06120 Ankara', 'memorial@info.com.tr', 'www.memorialhospital.com.tr', '03123323251');

Insert into Hospital values (2988, 'Medicana Hospital', 'Çankaya, 06120 Ankara', 'medicana@info.com.tr', 'www.medicanahospital.com.tr', '03123323232');

Insert into Hospital values (4465, 'Çağ Hospital', 'Sincan, 06120 Ankara', 'caghospital@info.com.tr', 'www.caghospital.com.tr', '03123323232');

Insert into Hospital values (6325, 'Yüksel Hospital', 'Etlik, 06120 Ankara', 'yuksel@info.com.tr', 'www.yukselhospital.com.tr', '03123323232');

Insert into Hospital values (4578, 'Demir Hospital', 'Mamak, 06120 Ankara', 'demir@info.com.tr', 'www.demirhospital.com.tr', '03123323232');

Insert into Hospital values (6875, 'Çetin Hospital', 'Gölbaşı, 06120 Ankara', 'cetin@info.com.tr', 'www.cetinhospital.com.tr', '03123323232');

Insert into Hospital values (4465, 'Gül Hospital', 'Çubuk, 06120 Ankara', 'gul@info.com.tr', 'www.gulhospital.com.tr', '03123323232');

Insert into Hospital values (8541, 'Tekin Hospital', 'Mamak, 06120 Ankara', 'tekin@info.com.tr', 'www.tekinhospital.com.tr', '03123323232');

Insert into Hospital values (7362, 'Kılıç Hospital', 'Etlik, 06120 Ankara', 'kilic@info.com.tr', 'www.kilichospital.com.tr', '03123323232');

Create Table **Appointment**(

app_id int primary key,

app_date varchar(10),

app_time varchar(5),

patient_id int,

doctor_id int,

Foreign key(patient_id) references patient_hospital_information (patient_id),

Foreign key(doctor_id) references doctor_hospital_information (doctor_id)

);

Insert into Appointment values (886, '20/12/2022', '13.50', 43849334343, 1);

Insert into Appointment values (741, '05/01/2023', '12.15', 43849334343, 2);

Insert into Appointment values (452, '20/02/2023', '09.50', 7676576858, 3);

Insert into Appointment values (815, '12/01/2023', '11.30', 59834324365, 4);

Insert into Appointment values (1001, '05/02/2023', '13.30', 43243245, 5);

Insert into Appointment values (1020, '20/01/2022', '14.40', 43243245, 6);

Insert into Appointment values (1568, '13/01/2023', '16.10', 534768562, 7);

Insert into Appointment values (1849, '18/01/2023', '10.50', 502465428, 8);

Insert into Appointment values (1789, '19/01/2023', '15.30',659852613, 9);

Insert into Appointment values (5842, '06/02/2023', '13.45', 438551846, 10);

Create table **Prescription**(

Prescription_id int primary key,

Patient_id int,

Doctor_id int,

Foreign key(patient_id) references patient(patient_id),

Foreign key(doctor_id) references doctor(doctor_id),

Medication varchar(30)

);

Insert into Prescription values (1,'432543554',' 4384934328','parol');

Insert into Prescription values (2,'432565464',' 4384934343' ,'calpol');

Insert into Prescription values (3,'324435542',' 7676576858','majezik');

Insert into Prescription values (4,'980794345',' 598345858 ','arveles');

Insert into Prescription values (5,'765765775',' 598345891','aferin');

Insert into Prescription values (6,'134354133',' 43243246','nurofen');

Insert into Prescription values (7,'465486511',' 43243245','parol');

Insert into Prescription values (8,'489131135',' 7654654456','nurofen');

Insert into Prescription values (9,'489413131',' 6544455645',calpol');

Insert into Prescription values (10,'867557656',' 89032432','parol');

Create table **Pharmacy**(

Ph_id int primary key,

Ph_name varchar(20),

Ph_adress varchar(20),

Ph_email varchar(20),

Ph_phone_number varchar(10)

);

Insert into Pharmacy values (1,'Era Eczanesi', 'Ankara/Esertepe', 'era@pharmacy.com', '3124585434');

Insert into Pharmacy values (2,'Haseki', 'Ankara/Mamak', 'haseki@pharmacy.com', '3124564837');

Insert into Pharmacy values (3,'Narin Eczanesi', 'Ankara/Etlik', 'narin@pharmacy.com', '3127453718');

Insert into Pharmacy values (4,'Çelebi Eczanesi', 'Ankara/İncek', 'celebi@pharmacy.com', '3121188054');

Insert into Pharmacy values (5,'Yıldız Eczanesi', 'Ankara/Batıkent', 'yıldız@pharmacy.com', '3125736478');

Insert into Pharmacy values (6,'Esma Eczanesi', 'Ankara/Dışkapı', 'esma@pharmacy.com', '3124585722');

Insert into Pharmacy values (7,'Murat Eczanesi', 'Ankara/Bağcılar', 'murat@pharmacy.com', '3121235437');

Insert into Pharmacy values (8,'Kar Eczanesi', 'Ankara/Etlik', 'kar@pharmacy.com', '3129871237');

Insert into Pharmacy values (9,'Tanem Eczanesi', 'Ankara/Yüksel', 'tanem@pharmacy.com', '3124581258');

Insert into Pharmacy values (10,'Aygül Eczanesi', 'Ankara/Esertepe', 'aygul@pharmacy.com', '3127852146');

Create table **Makes**(

patient_id int primary key,

foreign key(patient_id) references patient_hospital_information(patient_id),

App_id int ,

foreign key(app_id) references Appointment (app_id)

);

Insert into Makes values(1, 886);

Insert into Makes values(2, 741;

Insert into Makes values(3, 452);

Insert into Makes values(4, 815);

Insert into Makes values(5, 1001);

Insert into Makes values(6, 1020);

Insert into Makes values(7, 1568);

Insert into Makes values(8, 1849);

Insert into Makes values(9, 1789);

Insert into Makes values(10, 5842);

Create table **See**(

app_id int primary key,

foreign key(app_id) references Appointment(app_id),

Doctor_id int,

foreign key(doctor_id) references Doctor(doctor_id)

);

Insert into See values (886, 43849334328)

Insert into See values (741, 43849334323)

Insert into See values (452, 76765768577)

Insert into See values (815, 59834589111)

Insert into See values (1001, 59834589111)

Insert into See values (1020, 43849334328)

Insert into See values (1568, 43849334328)

Insert into See values (1849, 76765768566)

Insert into See values (1789, 65444556455)

Insert into See values (5842, 89032432000)

VII. QUERY DESIGNS

1.) Display data from multiple tables (join)

Select d.department_id, d.department_name, h.h_id, h.hospital_name

From department d, hospital h

Where d.h_id = h.h_id

And department_name = 'Neurology';

2.) Group by statement

Select do.d_name,do.department_id, do.d_salary, AVG(do.d_salary) as AverageSalary

From doctor_hospital_information do, department de

Where do.department_id = de.department_id

And department_id = '332444334'

Group By department_id

3.) Order By Statement

Select attendant_id, a_name, a_salary

From hospital_attendant

Order By Salary DESC;

4.) SUBQUERY

Select d_name, d_salary

From doctor_hospital_information

Where d_salary > all (

      Select d_salary

      From doctor_hospital_information

      Where d_name = 'Fatih'

      );

5.) SELECT ALL ENTITIES

Select *

From pharmacy

Where ph_id > 8;