Piedmont Atlanta Hospital Database

CIS 8040 – Database Management Systems

Georgia State University J Mack Robinson College of Business

21st Feb 2019

INTRODUCTION

Piedmont Atlanta Hospital located in Buckhead is a leader in patient care that's helped the Atlanta community get better and stay well for more than a century. Medical databases serve a critical function in healthcare areas like patient care and administration.

This application of database focuses on real world application system to maintain the day-to-day state of patient admission/discharge, list of doctors and retrieve these details as and when required, pharmacy details, administration, billing and payment processing.

ASSUMPTIONS:

1. The data is limited to 40 records for this assignment. It a just a sample of a huge hospital dataset.
2. Patients of all ages are diagnosed.
3. Each room has single bed.
4. There is only 1 pharmacy in the hospital
5. The hospital has 3 floors and each floor has 10 rooms. The floor number is identified by the first character of the room number (e.g. 101, 204)

CONCEPTUAL MODEL

The hospital database consists of the following entities:

1. Patient
   Holds data related to patient's user id, password, name, age, gender, phone number, address, admit date and discharge date

2. Doctor
   Holds data pertaining to doctor's id, specialization, name, gender, cabin number, phone number and email id

3. Nurse
   Holds data related to nurse's username, password, gender, name and phone number

4. Room
   Holds data related to room allocated to patient's room number, date and status

5. Admin
   Holds data pertaining to admin username, password, email, name, gender and phone number

6. Pharmacy
   Holds data like medical bill number, patient name and amount

7. Hospital Bill
   Holds data related to patient's hospital bill, bill number and the amount
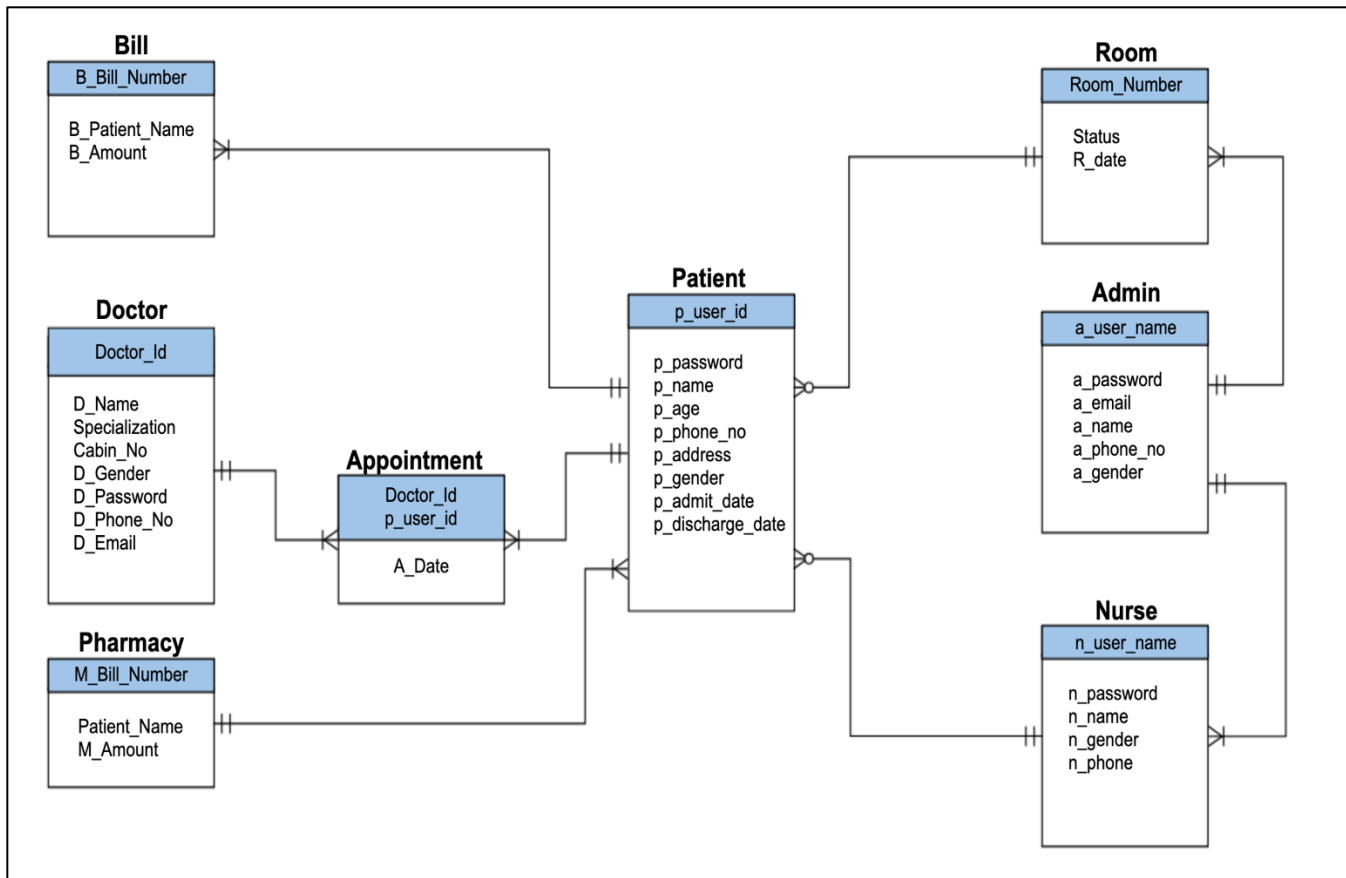
BUSINESS RULES

1.   Hospital should have at least one patient.
2.   Room may or may not have patient admitted.
3.   Every patient can have one or more hospital bills, but each bill should belong to only one patient.
4.   There is a relationship attribute Appointment between Patient and Doctor.
5.   Each patient may or may not have a medical bill while every medical bill should be there for the patients.
6.   Every hospital room may or may not be allocated to a patient, but each patient should be allotted only one room.
7.   Each patient can be attended by only one nurse, but each nurse can be assigned to 0 or many patients.
8.   The admin keeps tracks of each and every nurse and each nurse reports to a single admin of the hospital.
9.   The admin manages every room available in the hospital, but all the rooms are managed by a single admin.

RELATIONAL MODEL

The relational model is created by transforming the conceptual model created above. The entities are transformed into relations/tables. The fields are created using the attributes with properties of primary keys and foreign keys constraints are assigned based on the business rules.

1. Bill
   Primary key : Bill_Number
   - The table has one to many relationship with Patient table, hence the primary key p_user_id of Patient table has been placed in the Bill table as a foreign key

2. Doctor
   Primary key : Doctor_ID

3. Nurse
   Primary key : N_username
   - The table has one to many relationship with Admin table, hence the primary key a_user_name of Admin table has been placed in the Nurse table as a foreign key

4. Pharmacy
   Primary key : Medical_Bill_Number

5. Room
   Primary key : Room_Number
   - The table has one to many relationship with Admin table, hence the primary key a_user_name of Admin table has been placed in the Nurse table as a foreign key

6. Patient
   Primary key : User_ID
   - The table has many to one relationship with Pharmacy table, hence the primary key M_Bill_Number of Pharmacy table has been placed in the Patient table as a foreign key
   - The table one to many relationship with Room table and hence the primary key Room_Number of Room Table has been placed in the Patient table as a foreign key
   - The table one to many relationship with Nurse table and hence the primary key n_user_name of Nurse Table has been placed in the Patient table as a foreign key

7. Admin
   Primary key : A_username

8. Appointment
   - The many to many relationship between Patient table and Doctor table is represented by Appointment table with composite primary keys User_ID and Doctor_ID from Patient and Doctor table placed as foreign keys in the Appointment table along with the attribute Date.

Bill

PK	B_Bill_Number int NOT NULL
	B_Patient_Name varchar(50) NOT NULL
	B_Amount float NOT NULL
FK	p_user_id varchar(50) NOT NULL

Doctor

PK	Doctor_Id int NOT NULL
	D_Name varchar(50) NOT NULL
	Specialization varchar(50) NOT NULL
	Cabin_No int NOT NULL
	D_Gender varchar(20) NULL
	D_Password varchar(15) NOT NULL
	D_Phone_No int NOT NULL
	D_Email varchar(50) NOT NULL

Appointment

(PK,FK)	Doctor_Id int NOT NULL
(PK,FK)	p_used_id varchar(50) NOT NULL
	a_Date date Not Null

Pharmacy

PK	M_Bill_Number int NOT NULL
	Patient_Name varchar(50) NOT NULL
	M_Amount float(10) NOT NULL

Patient

PK	p_user_id varchar(50) NOT NULL
	p_password varchar(20) NOT NULL
	p_name varchar(50) NOT NULL
	p_age int NOT NULL
	p_phone_no int NULL
	p_address varchar(50) NULL
	p_gender varchar(10) NOT NULL
	p_admit_date date NOT NULL
	p_discharge_date date NOT NULL
FK	M_Bill_Number int NOT NULL
FK	Room_Number int NOT NULL
FK	n_user_name varchar(50) NOT NULL

Room

PK	Room_Number int NOT NULL
	Status char(50) NOT NULL
	R_date date NOT NULL
FK	a_user_name varchar(50) NOT NULL

Admin

PK	a_user_name varchar(50) NOT NULL
	a_password varchar(50) NOT NULL
	a_email varchar(50) NOT NULL
	a_name varchar(50) NOT NULL
	a_phone_no int NULL
	a_gender varchar(10) NULL

Nurse

PK	n_user_name varchar(50) NOT NULL
	n_password varchar(50) NOT NULL
	n_name varchar(50) NOT NULL
	n_gender varchar(10) NOT NULL
	n_phone int NOT NULL
FK	a_user_name varchar(50) NOT NULL

DATABASE ENTRIES

1. Admin

select * from admin;

```
select * from admin;
```

Script Output ×   Query Result ×

SQL | All Rows Fetched: 30 in 0.032 seconds

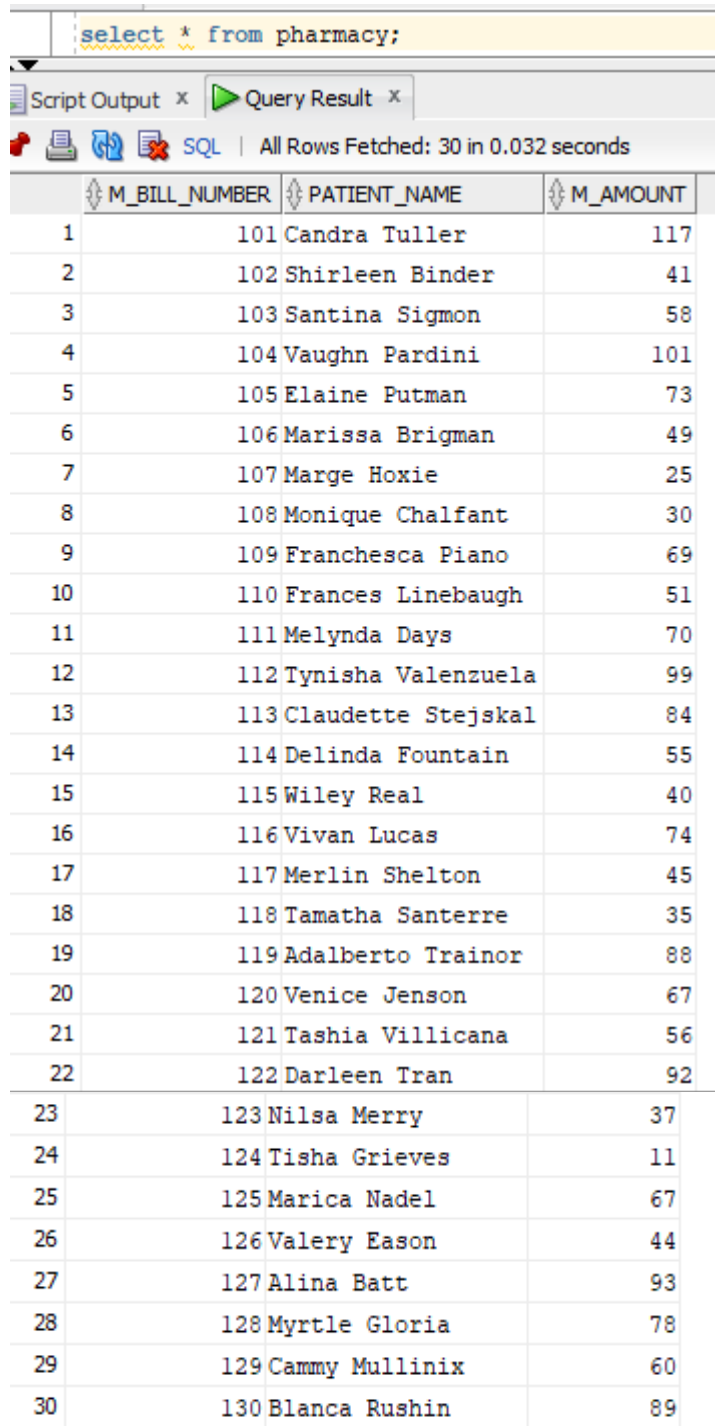|	A_USER_NAME	A_PASSWORD	A_EMAIL	A_NAME	A_PHONE_NO	A_GENDER
1	Cendy.Pecker@gmail.com	Pfghjflt26	Cendy.Pecker@gmail.com	Cendy Pecker	4706575645	Male
2	Sreen.Brebder@gmail.com	Cbdhftualuul6	Sreen.Brebder@gmail.com	Sreen Brebder	4045623232	Female
3	Pantrina.Migmoro@gmail.com	Ifrhjyhtmkp18	Pantrina.Migmoro@gmail.com	Pantrina Migmoro	5356541234	Female
4	Ashanti.Graham@gmail.com	Kdqcn48	Ashanti.Graham@gmail.com	Ashanti Graham	4971935617	Male
5	Sophie.Newton@gmail.com	Kotue93	Sophie.Newton@gmail.com	Sophie Newton	4541150319	Male
6	Ava-Mae.Mcintyre@gmail.com	]rkkt96	Ava-Mae.Mcintyre@gmail.com	Ava-Mae Mcintyre	5376154785	Male
7	Saqlain.Alvarez@gmail.com	Bcecg67	Saqlain.Alvarez@gmail.com	Saqlain Alvarez	5249996885	Female
8	Vincenzo.Duarte@gmail.com	Rnhck12	Vincenzo.Duarte@gmail.com	Vincenzo Duarte	4492373826	Female
9	Marcelina.Tomlinson@gmail.com	Rhils91	Marcelina.Tomlinson@gmail.com	Marcelina Tomlinson	4998199345	Male
10	Ruari.Yoder@gmail.com	Ahlsm71	Ruari.Yoder@gmail.com	Ruari Yoder	5156548021	Male
11	Nancie.Pope@gmail.com	Foksh21	Nancie.Pope@gmail.com	Santiago Gentry	4315908837	Male
12	Zarah.Dunkley@gmail.com	Jdooi88	Zarah.Dunkley@gmail.com	Nancie Pope	4462510365	Female
13	Marcel.Schofield@gmail.com	Wagfb25	Marcel.Schofield@gmail.com	Zarah Dunkley	5395275961	Female
14	Katharine.Koch@gmail.com	Timun96	Katharine.Koch@gmail.com	Marcel Schofield	4541915461	Male
15	Tevin.Hoover@gmail.com	Wfhts22	Tevin.Hoover@gmail.com	Katharine Koch	5862950349	Female
16	Subhaan.Singh@gmail.com	Guall77	Subhaan.Singh@gmail.com	Tevin Hoover	5460881240	Female
17	Viola.Eaton@gmail.com	Tmcjm54	Viola.Eaton@gmail.com	Subhaan Singh	6043647535	Male
18	Keir.Ayers@gmail.com	Tfjtt68	Keir.Ayers@gmail.com	Viola Eaton	4294498673	Female
19	Amir.Mcarthur@gmail.com	Fcjkp96	Amir.Mcarthur@gmail.com	Keir Ayers	5005319089	Female
20	Zain.Berg@gmail.com	Lcrke27	Zain.Berg@gmail.com	Amir Mcarthur	5292391785	Female
21	Sameeha.Macgregor@gmail.com	\ghue56	Sameeha.Macgregor@gmail.com	Zain Berg	4936625138	Female
22	Jeremiah.Phillips@gmail.com	Utic160	Jeremiah.Phillips@gmail.com	Sameeha Macgregor	5864299125	Male
23	Annabell.Hudson@gmail.com	Oncfe28	Annabell.Hudson@gmail.com	Jeremiah Phillips	4278652763	Male
24	Zakk.Downs@gmail.com	[pqta14	Zakk.Downs@gmail.com	Annabell Hudson	5351214405	Female
25	Oliwia.Galindo@gmail.com	]flrp25	Oliwia.Galindo@gmail.com	Zakk Downs	4774542998	Female
26	Arley.Sanders@gmail.com	Kcdem44	Arley.Sanders@gmail.com	Oliwia Galindo	4365056010	Male
27	Lilly-Mai.Wills@gmail.com	Gjpfp14	Lilly-Mai.Wills@gmail.com	Arley Sanders	5204327248	Male
28	Suhayb.Preston@gmail.com	^bqid17	Suhayb.Preston@gmail.com	Lilly-Mai Wills	5970465661	Male
29	Theo.Joyner@gmail.com	Yepkp72	Theo.Joyner@gmail.com	Suhayb Preston	5074083278	Female
30	Theo.Joyner	Tffrd88	Theo.Joyner	Theo Joyner	4632271827	Female

2. Doctor

select * from DOCTOR;

```
select * from DOCTOR;
```

Script Output × | Query Result ×

SQL | All Rows Fetched: 40 in 0.028 seconds

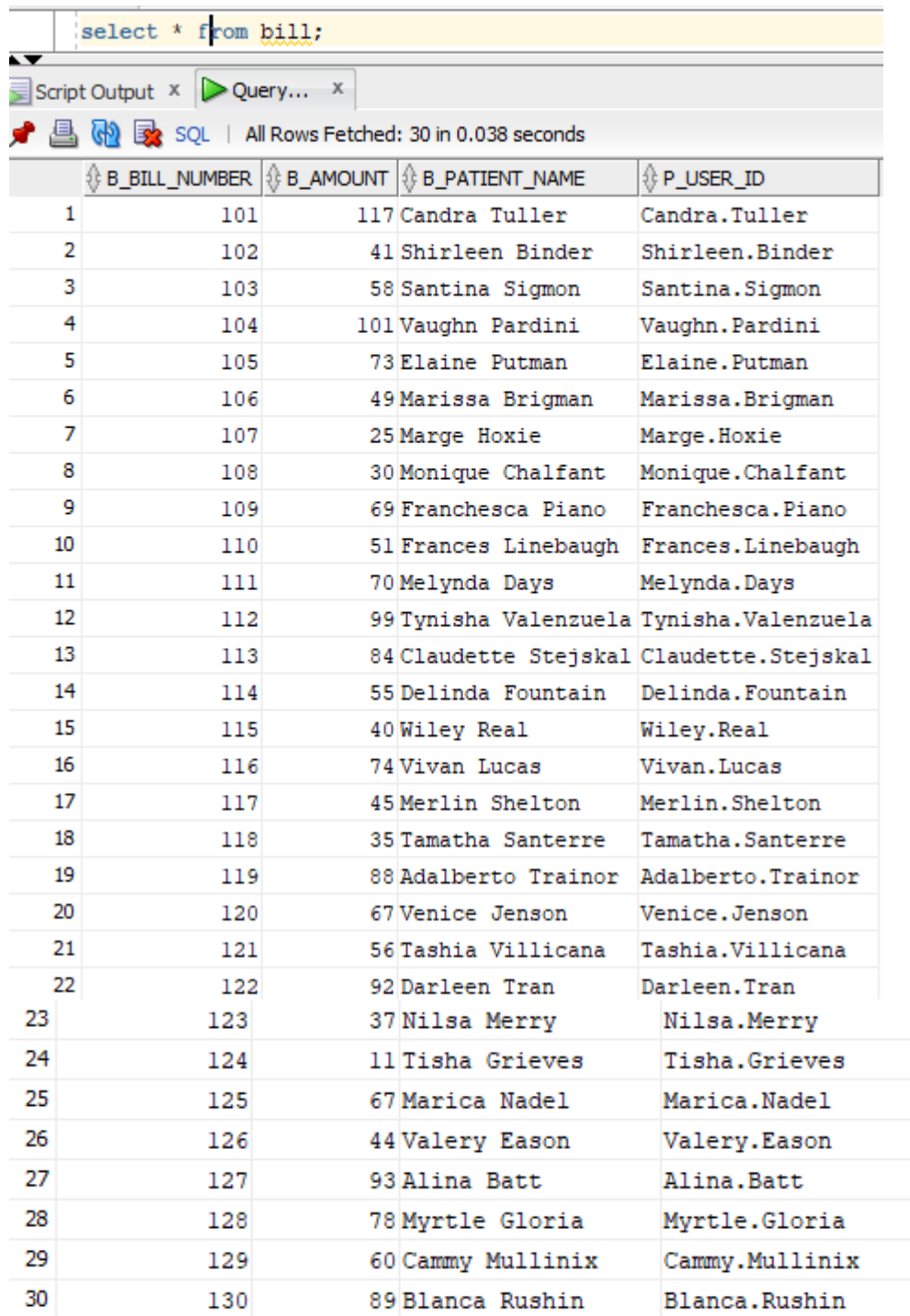|	DOCTOR_ID	SPECIALIZATION	CABIN_NO	D_SEX	D_NAME	D_PASSWORD	D_PHONE_NO	D_EMAIL
1	750752	Physician	181	Male	Divine Parsons	Mmflt26	4469918040	Divine.Parsons@gmail.com
2	480673	Pulmonologist	37	Female	Jacob Booth	Caluul6	4992396307	Jacob.Booth@gmail.com
3	765368	Physician	151	Female	Darcy Finch	Itmkp18	5611448339	Darcy.Finch@gmail.com
4	589532	Obstetrician/Gynecologist (OB/GYN)	161	Female	Shyla Rich	Iopdq31	5211490471	Shyla.Rich@gmail.com
5	948721	Physician	134	Female	Cathal Leal	Pnset81	5134248239	Cathal.Leal@gmail.com
6	500930	Neurologist	166	Female	Aiesha Ferrell	Fjjpg12	6132414305	Aiesha.Ferrell@gmail.com
7	559831	Physician	22	Male	Loui Wong	Bbrga24	5859472165	Loui.Wong@gmail.com
8	567490	Physician	69	Female	Ayaz Rocha	Frtnq47	5005177513	Ayaz.Rocha@gmail.com
9	778800	Physician	60	Male	Yousuf Robson	Fhppe23	4619130839	Yousuf.Robson@gmail.com
10	755595	Physician	85	Female	Candice Duffy	Wmfda19	5559888186	Candice.Duffy@gmail.com
11	582653	Physician	7	Female	Taio Clay	Wlfkh76	4163322257	Taio.Clay@gmail.com
12	491702	Physician	32	Male	Kenzo Moyer	Cggrd57	4693050461	Kenzo.Moyer@gmail.com
13	926780	Gastroenterologist	59	Male	Deacon Farley	Fdmbi11	4221245181	Deacon.Farley@gmail.com
14	858184	Physician	203	Male	Tracey Dickerson	Komqd74	4454862319	Tracey.Dickerson@gmail.com
15	525679	Radiologist	142	Male	Peyton Spencer	Vorog74	4122875618	Peyton.Spencer@gmail.com
16	534468	Physician	154	Female	Yousif Garrison	Vkacr67	5221991343	Yousif.Garrison@gmail.com
17	640534	Endocrinologist	19	Male	Taiba O'Connor	Bpmjf30	6221852985	Taiba.O'Connor@gmail.com
18	784099	Dermatologist	216	Male	Kirk Oneal	Ytbto27	5372210138	Kirk.Oneal@gmail.com
19	579721	Physician	150	Female	Theodore Magana	Tlmli72	4993732780	Theodore.Magana@gmail.com
20	685259	Psychiatrist	135	Male	Neil Mccartney	Rqeiql9	4483328702	Neil.Mccartney@gmail.com
21	533349	Physician	71	Male	Patricia O'Gallagher	Bfghl27	6413593608	Patricia.O'Gallagher@gmail.com
22	666756	Cardiologist	218	Male	Wendy Armstrong	Glihk60	4939951272	Wendy.Armstrong@gmail.com
23	502891	Physician	156	Male	Ayda Holman	Wfurq78	4211065327	Ayda.Holman@gmail.com
24	559346	Physician	94	Male	Dolcie Bates	Necih72	5115366636	Dolcie.Bates@gmail.com
25	823185	Physician	184	Male	Isis Page	Htntb38	5955280287	Isis.Page@gmail.com
26	916253	Physician	105	Male	Moesha Bateman	Xdpdr38	6393430256	Moesha.Bateman@gmail.com
27	832878	Physician	124	Female	Amanah Padilla	Xcptc37	4742950908	Amanah.Padilla@gmail.com
28	806742	Physician Executive	198	Female	Leena Kinney	Yaaca80	5822521651	Leena.Kinney@gmail.com
29	499640	Oncologist	139	Female	Andy Morrison	Vkmcp66	4169281475	Andy.Morrison@gmail.com
30	588875	Anesthesiologist	113	Male	Alessia Ashley	Yicjo23	5566296318	Alessia.Ashley@gmail.com
31	687237	Physician	133	Male	Verity Zimmerman	Lmdca91	4635153201	Verity.Zimmerman@gmail.com
32	664451	Physician	204	Female	Montgomery Hooper	Hpgep31	4727504509	Montgomery.Hooper@gmail.com
33	707623	Ophthalmologist	217	Female	Sumaiyah Serrano	Bctcg21	4357585482	Sumaiyah.Serrano@gmail.com
34	745014	Nephrologist	16	Female	Louise Hartley	Vsohu71	4771254248	Louise.Hartley@gmail.com
35	466887	Physician	164	Male	Ephraim Rodriquez	Yskcn85	5605302315	Ephraim.Rodriquez@gmail.com
36	522741	Surgeon	26	Female	Klaudia Schwartz	Nejdg26	4922085218	Klaudia.Schwartz@gmail.com
37	872894	Pediatrician	40	Female	Ayisha Mcloughlin	Aakph27	6236246786	Ayisha.Mcloughlin@gmail.com
38	767958	Physician	199	Female	Khushi Holt	Ngkrh49	4419597799	Khushi.Holt@gmail.com
39	756141	Physician	65	Female	Alyssa Thornton	Qgmio39	5788834732	Alyssa.Thornton@gmail.com
40	598587	Physician	217	Female	Leandro Schroeder	Atrce44	5167823668	Leandro.Schroeder@gmail.com

3. Pharmacy

select * from pharmacy;

```
select * from pharmacy;
```

Script Output ×   Query Result ×

SQL | All Rows Fetched: 30 in 0.032 seconds

	M_BILL_NUMBER	PATIENT_NAME	M_AMOUNT
1	101	Candra Tuller	117
2	102	Shirleen Binder	41
3	103	Santina Sigmon	58
4	104	Vaughn Pardini	101
5	105	Elaine Putman	73
6	106	Marissa Brigman	49
7	107	Marge Hoxie	25
8	108	Monique Chalfant	30
9	109	Franchesca Piano	69
10	110	Frances Linebaugh	51
11	111	Melynda Days	70
12	112	Tynisha Valenzuela	99
13	113	Claudette Stejskal	84
14	114	Delinda Fountain	55
15	115	Wiley Real	40
16	116	Vivan Lucas	74
17	117	Merlin Shelton	45
18	118	Tamatha Santerre	35
19	119	Adalberto Trainor	88
20	120	Venice Jenson	67
21	121	Tashia Villicana	56
22	122	Darleen Tran	92
23	123	Nilsa Merry	37
24	124	Tisha Grieves	11
25	125	Marica Nadel	67
26	126	Valery Eason	44
27	127	Alina Batt	93
28	128	Myrtle Gloria	78
29	129	Cammy Mullinix	60
30	130	Blanca Rushin	89

4. Bill

select * from bill;

	B_BILL_NUMBER	B_AMOUNT	B_PATIENT_NAME	P_USER_ID
1	101	117	Candra Tuller	Candra.Tuller
2	102	41	Shirleen Binder	Shirleen.Binder
3	103	58	Santina Sigmon	Santina.Sigmon
4	104	101	Vaughn Pardini	Vaughn.Pardini
5	105	73	Elaine Putman	Elaine.Putman
6	106	49	Marissa Brigman	Marissa.Brigman
7	107	25	Marge Hoxie	Marge.Hoxie
8	108	30	Monique Chalfant	Monique.Chalfant
9	109	69	Franchesca Piano	Franchesca.Piano
10	110	51	Frances Linebaugh	Frances.Linebaugh
11	111	70	Melynda Days	Melynda.Days
12	112	99	Tynisha Valenzuela	Tynisha.Valenzuela
13	113	84	Claudette Stejskal	Claudette.Stejskal
14	114	55	Delinda Fountain	Delinda.Fountain
15	115	40	Wiley Real	Wiley.Real
16	116	74	Vivan Lucas	Vivan.Lucas
17	117	45	Merlin Shelton	Merlin.Shelton
18	118	35	Tamatha Santerre	Tamatha.Santerre
19	119	88	Adalberto Trainor	Adalberto.Trainor
20	120	67	Venice Jenson	Venice.Jenson
21	121	56	Tashia Villicana	Tashia.Villicana
22	122	92	Darleen Tran	Darleen.Tran
23	123	37	Nilsa Merry	Nilsa.Merry
24	124	11	Tisha Grieves	Tisha.Grieves
25	125	67	Marica Nadel	Marica.Nadel
26	126	44	Valery Eason	Valery.Eason
27	127	93	Alina Batt	Alina.Batt
28	128	78	Myrtle Gloria	Myrtle.Gloria
29	129	60	Cammy Mullinix	Cammy.Mullinix
30	130	89	Blanca Rushin	Blanca.Rushin

5. Patient

select * from PATIENT;

	P_USER_ID	P_PASSWORD	P_NAME	P_AGE	P_PHONE_NO	P_ADDRESS	P_SEX	PT_ADMIT_DATE	PT_DISCHARGE_DATE	M_BILL_NUMBER	ROOM_NUMBER	N_USER_NAME
1	Candra.Tuller	Mmflt26	Candra Tuller	56	4469918040	526-7995 Mauris Av	Male	04-FEB-18	20-FEB-18	101	309	Kobi.Crawford@gmail
2	Shirleen.Binder	Caluul6	Shirleen Binder	70	4992396307	5642 Mus. Road	Male	19-FEB-18	25-FEB-18	102	208	Rima.Pike@gmail.com
3	Santina.Sigmon	Itmkp18	Santina Sigmon	51	5611448339	5216 Consequat Avenue	Male	05-JAN-18	27-JAN-18	103	203	Rueben.Wickens@gmai
4	Vaughn.Pardini	Iopdq31	Vaughn Pardini	10	5211490471	5061 Justo Avenue	Female	28-FEB-18	11-MAR-18	104	106	Bridie.Tran@gmail.c
5	Elaine.Putman	Pnset81	Elaine Putman	48	5134248239	Ap #780-9646 Ipsum Av	Female	10-JAN-18	17-JAN-18	105	202	Anton.Larsen@gmail.
6	Marissa.Brigman	Fjjpgl2	Marissa Brigman	63	6132414305	Ap #628-267 Pede. Road	Male	16-FEB-18	05-MAR-18	106	104	Jesse.Hudson@gmail.
7	Marge.Hoxie	Bbrga24	Marge Hoxie	8	5859472165	306 Elementum Av	Male	16-FEB-18	04-MAR-18	107	201	Shayaan.Brock@gmail
8	Monique.Chalfant	Frtnq47	Monique Chalfant	73	5005177513	967-254 Sodales Ave	Male	23-JAN-18	12-FEB-18	108	110	Sophia.Elliott@gmai
9	Franchesca.Piano	Fhppe23	Franchesca Piano	58	4619130839	Ap #251-9135 Proin Road	Female	06-FEB-18	22-FEB-18	109	109	Montel.Bryan@gmail.
10	Frances.Linebaugh	Wmfda19	Frances Linebaugh	30	5559888186	Ap #806-1883 Nec Road	Female	05-FEB-18	12-FEB-18	110	107	Domonic.Mclean@gmai
11	Melynda.Days	Wlfkh76	Melynda Days	55	4163322257	9067 Sociis Road	Male	26-JAN-18	17-FEB-18	111	105	Fannie.Bevan@gmail.
12	Tynisha.Valenzuela	Cggrd57	Tynisha Valenzuela	41	4693050461	822-5011 Quisque Rd	Female	24-JAN-18	13-FEB-18	112	205	Francesca.Swift@gma
13	Claudette.Stejskal	Fdmbill	Claudette Stejskal	5	4221245181	4329 Ligula Street	Female	21-JAN-18	26-JAN-18	113	108	Hussain.Kirkland@gm
14	Delinda.Fountain	Komqd74	Delinda Fountain	31	4454862319	P.O. Box 185, 1163 Nunc Rd	Male	12-JAN-18	28-JAN-18	114	302	Jameson.Kaufman@gma
15	Wiley.Real	Vorog74	Wiley Real	56	4122875618	Ap #505-3548 Pharetra St	Female	05-JAN-18	14-JAN-18	115	306	Dina.O'Doherty@gmai
16	Vivan.Lucas	Vkacr67	Vivan Lucas	71	5221991343	P.O. Box 577, 5454 Dis Av	Female	20-FEB-18	17-MAR-18	116	307	Charles.Le@gmail.co
17	Merlin.Shelton	Bpmjf30	Merlin Shelton	14	6221852985	7357 Tincidunt Street	Female	15-FEB-18	27-FEB-18	117	210	Carwyn.Coffey@gmail
18	Tamatha.Santerre	Ytbto27	Tamatha Santerre	61	5372210138	5976 Semper St	Female	19-JAN-18	05-FEB-18	118	101	Imani.Rankin@gmail.
19	Adalberto.Trainor	Tlmli72	Adalberto Trainor	22	4993732780	P.O. Box 723, 6697 Et Rd	Male	20-JAN-18	27-JAN-18	119	204	Kunal.Garrett@gmail
20	Venice.Jenson	Rqeiq19	Venice Jenson	31	4483328702	604-2533 Massa. Rd	Male	28-JAN-18	03-FEB-18	120	206	Lucian.Dickson@gmai
21	Tashia.Villicana	Bfgh127	Tashia Villicana	76	6413593608	Ap #140-8152 Metus. Road	Female	01-FEB-18	15-FEB-18	121	207	Ishaan.Fellows@gmai
22	Darleen.Tran	Glihk60	Darleen Tran	26	4939951272	5002 A St	Female	17-FEB-18	11-MAR-18	122	209	Caroline.Burke@gmai
23	Nilsa.Merry	Wfurq78	Nilsa Merry	78	4211065327	416-3699 Dolor, St	Male	24-FEB-18	13-MAR-18	123	103	Belinda.Cornish@gma
24	Tisha.Grieves	Necih72	Tisha Grieves	35	5115366636	7452 Ligula. Ave	Male	14-FEB-18	01-MAR-18	124	304	Reon.Curry@gmail.co
25	Marica.Nadel	Htntb38	Marica Nadel	19	5955280287	3047 Sed Road	Male	01-FEB-18	11-FEB-18	125	102	Dana.Ahmed@gmail.co
26	Valery.Eason	Xdpdr38	Valery Eason	79	6393430256	6803 Lacus. Rd	Female	23-FEB-18	06-MAR-18	126	303	Isla-Mae.Rich@gmail
27	Alina.Batt	Xcptc37	Alina Batt	78	4742950908	1597 Faucibus Rd	Female	09-FEB-18	19-FEB-18	127	305	Janet.Rollins@gmail
28	Myrtle.Gloria	Yaaca80	Myrtle Gloria	8	5822521651	Ap #567-9023 Pulvinar Av	Female	04-FEB-18	22-FEB-18	128	301	Ariah.Simmons@gmail
29	Cammy.Mullinix	Vkmcp66	Cammy Mullinix	72	4169281475	P.O. Box 743, 918 Fusce Rd	Male	01-JAN-18	18-JAN-18	129	308	Emile.Olsen@gmail.c
30	Blanca.Rushin	Yicjo23	Blanca Rushin	19	5566296318	Ap #433-9425 Augue Ave	Female	01-FEB-18	17-FEB-18	130	310	Kierran.Lester@gmai

6. Appointment

SELECT * from APPOINTMENT;

```
SELECT * from APPOINTMENT;
```

Script Output × | Query Result ×

SQL | All Rows Fetched: 30 in 0.046 seconds

	DOCTOR_ID	P_USER_ID	A_DATE
1	750752	Candra.Tuller	19-FEB-18
2	480673	Shirleen.Binder	11-FEB-18
3	765368	Santina.Sigmon	27-JAN-18
4	589532	Vaughn.Pardini	20-JAN-18
5	948721	Elaine.Putman	30-JAN-18
6	500930	Marissa.Brigman	23-JAN-18
7	559831	Marge.Hoxie	25-JAN-18
8	567490	Monique.Chalfant	01-FEB-18
9	778800	Franchesca.Piano	27-FEB-18
10	755595	Frances.Linebaugh	17-FEB-18
11	582653	Melynda.Days	13-FEB-18
12	491702	Tynisha.Valenzuela	31-JAN-18
13	926780	Claudette.Stejskal	18-JAN-18
14	858184	Delinda.Fountain	26-JAN-18
15	525679	Wiley.Real	23-JAN-18
16	534468	Vivan.Lucas	20-JAN-18
17	640534	Merlin.Shelton	15-FEB-18
18	784099	Tamatha.Santerre	19-FEB-18
19	579721	Adalberto.Trainor	16-FEB-18
20	685259	Venice.Jenson	10-FEB-18
21	533349	Tashia.Villicana	02-MAR-18
22	666756	Darleen.Tran	24-FEB-18
23	502891	Nilsa.Merry	16-JAN-18
24	559346	Tisha.Grieves	26-FEB-18
25	823185	Marica.Nadel	23-FEB-18
26	916253	Valery.Eason	15-FEB-18
27	832878	Alina.Batt	08-FEB-18
28	806742	Myrtle.Gloria	04-FEB-18
29	499640	Cammy.Mullinix	15-JAN-18
30	588875	Blanca.Rushin	19-FEB-18

7. Nurse

SELECT * from NURSE;

	N_USER_NAME	N_PASSWORD	N_NAME	N_GENDER	N_ADDRESS	N_PHONE	A_USER_NAME
1	Kobi.Crawford@gmail.com	\cnmq12	Kobi Crawford	Female	9676 Meadow St. Jonesborough, TN 37659	6184261608	Cendy.Pecker@gmail.com
2	Rima.Pike@gmail.com	Eumml70	Rima Pike	Female	481 West Westminster Dr. Severna Park, MD 21146	6207985103	Sreen.Brebder@gmail.com
3	Rueben.Wickens@gmail.com	Gkuok92	Rueben Wickens	Female	60 East Garfield Drive Lynnwood, WA 98037	6887609504	Pantrina.Migmoro@gmail.com
4	Bridie.Tran@gmail.com	Ihakh47	Bridie Tran	Female	68 Campfire Rd. Bangor, ME 04401	6309242104	Ashanti.Graham@gmail.com
5	Anton.Larsen@gmail.com	Zepuh21	Anton Larsen	Female	8111 Vernon Street Dorchester, MA 02125	5932509198	Sophie.Newton@gmail.com
6	Jesse.Hudson@gmail.com	Dtitl58	Jesse Hudson	Female	987 East Roberts Ave. Ann Arbor, MI 48103	5307535566	Ava-Mae.Mcintyre@gmail.com
7	Shayaan.Brock@gmail.com	Ilnti85	Shayaan Brock	Female	31 Cross Road Winston Salem, NC 27103	4304304035	Saqlain.Alvarez@gmail.com
8	Sophia.Elliott@gmail.com	Stpkf45	Sophia Elliott	Female	7596 Pulaski Ave. Randolph, MA 02368	4189250797	Vincenzo.Duarte@gmail.com
9	Montel.Bryan@gmail.com	Udijj44	Montel Bryan	Female	281 N. Oak Court Glenside, PA 19038	6501513778	Marcelina.Tomlinson@gmail.com
10	Domonic.Mclean@gmail.com	Bedtal9	Domonic Mclean	Female	45 Linda Ave. Pueblo, CO 81001	5451217211	Ruari.Yoder@gmail.com
11	Fannie.Bevan@gmail.com	^nhag79	Fannie Bevan	Female	9781 Jennings Court Arlington, MA 02474	4591710051	Nancie.Pope@gmail.com
12	Francesca.Swift@gmail.com	Gidsj28	Francesca Swift	Female	4 North Glen Ridge Drive	4486331013	Zarah.Dunkley@gmail.com
13	Hussain.Kirkland@gmail.com	Ydbkd22	Hussain Kirkland	Female	Ozone Park, NY 11417	4585864066	Marcel.Schofield@gmail.com
14	Jameson.Kaufman@gmail.com	Ucadh64	Jameson Kaufman	Female	1 E. Meadowbrook St.	4761177732	Katharine.Koch@gmail.com
15	Dina.O'Doherty@gmail.com	\puai65	Dina O'Doherty	Female	Paducah, KY 42001	6596426096	Tevin.Hoover@gmail.com
16	Charles.Le@gmail.com	Zlkgj37	Charles Le	Female	9572 E. Laurel St.	5241154259	Subhaan.Singh@gmail.com
17	Carwyn.Coffey@gmail.com	Kpqir97	Carwyn Coffey	Female	Cranford, NJ 07016	4509059331	Viola.Eaton@gmail.com
18	Imani.Rankin@gmail.com	_eisp39	Imani Rankin	Female	724 Amerige Lane Saugus, MA 01906	6248329667	Keir.Ayers@gmail.com
19	Kunal.Garrett@gmail.com	Nlugp88	Kunal Garrett	Female	31 El Dorado Ave.	5177396703	Amir.Mcarthur@gmail.com
20	Lucian.Dickson@gmail.com	Ilseo19	Lucian Dickson	Female	Xenia, OH 45385	6741925646	Zain.Berg@gmail.com
21	Ishaan.Fellows@gmail.com	Ltiqu20	Ishaan Fellows	Female	592 Foster Ave.	6314469427	Sameeha.Macgregor@gmail.com
22	Caroline.Burke@gmail.com	Idegr62	Caroline Burke	Female	Elizabethton, TN 37643	4289121985	Jeremiah.Phillips@gmail.com
23	Belinda.Cornish@gmail.com	Hctip80	Belinda Cornish	Female	9875 West Manhattan Street	4443609572	Annabell.Hudson@gmail.com
24	Reon.Curry@gmail.com	Oaphg22	Reon Curry	Female	Madison, AL 35758	6461783232	Zakk.Downs@gmail.com
25	Dana.Ahmed@gmail.com	Dbbgt82	Dana Ahmed	Female	5 W. Fairview Avenue	4184278561	Oliwia.Galindo@gmail.com
26	Isla-Mae.Rich@gmail.com	Qcjdi38	Isla-Mae Rich	Female	Charleston, SC 29406	6589177757	Arley.Sanders@gmail.com
27	Janet.Rollins@gmail.com	Marmg63	Janet Rollins	Female	160 Campfire Avenue	6152608734	Lilly-Mai.Wills@gmail.com
28	Ariah.Simmons@gmail.com	Ppjmi31	Ariah Simmons	Female	Old Bridge, NJ 08857	6786355065	Suhayb.Preston@gmail.com
29	Emile.Olsen@gmail.com	Rjnrp33	Emile Olsen	Female	26 Overlook Drive	6464393805	Theo.Joyner@gmail.com
30	Kierran.Lester@gmail.com	\tjgt37	Kierran Lester	Female	Rockaway, NJ 07866	6695410953	Theo.Joyner

8.   Room

SELECT * from ROOM;

	ROOM_NUMBER	STATUS	R_DATE	A_USER_NAME
1	309	Vacant	08-JAN-19	Cendy.Pecker@gmail.com
2	208	Occupied	10-FEB-19	Sreen.Brebder@gmail.com
3	203	Occupied	05-JAN-19	Pantrina.Migmoro@gmail.com
4	106	Occupied	14-FEB-19	Ashanti.Graham@gmail.com
5	202	Occupied	15-JAN-19	Sophie.Newton@gmail.com
6	104	Occupied	04-JAN-19	Ava-Mae.Mcintyre@gmail.com
7	201	Occupied	30-JAN-19	Saqlain.Alvarez@gmail.com
8	110	Occupied	06-FEB-19	Vincenzo.Duarte@gmail.com
9	109	Occupied	15-FEB-19	Marcelina.Tomlinson@gmail.com
10	107	Occupied	25-JAN-19	Ruari.Yoder@gmail.com
11	105	Occupied	14-JAN-19	Nancie.Pope@gmail.com
12	205	Occupied	21-FEB-19	Zarah.Dunkley@gmail.com
13	108	Occupied	09-JAN-19	Marcel.Schofield@gmail.com
14	302	Vacant	21-FEB-19	Katharine.Koch@gmail.com
15	306	Vacant	06-FEB-19	Tevin.Hoover@gmail.com
16	307	Vacant	03-JAN-19	Subhaan.Singh@gmail.com
17	210	Vacant	02-JAN-19	Viola.Eaton@gmail.com
18	101	Occupied	16-JAN-19	Keir.Ayers@gmail.com
19	204	Occupied	07-JAN-19	Amir.Mcarthur@gmail.com
20	206	Occupied	04-FEB-19	Zain.Berg@gmail.com
21	207	Occupied	13-FEB-19	Sameeha.Macgregor@gmail.com
22	209	Occupied	18-JAN-19	Jeremiah.Phillips@gmail.com
23	103	Occupied	17-JAN-19	Annabell.Hudson@gmail.com
24	304	Vacant	02-JAN-19	Zakk.Downs@gmail.com
25	102	Occupied	01-JAN-19	Oliwia.Galindo@gmail.com
26	303	Vacant	16-FEB-19	Arley.Sanders@gmail.com
27	305	Vacant	02-FEB-19	Lilly-Mai.Wills@gmail.com
28	301	Vacant	23-JAN-19	Suhayb.Preston@gmail.com
29	308	Vacant	17-JAN-19	Theo.Joyner@gmail.com
30	310	Vacant	27-JAN-19	Theo.Joyner

Queries

1. Get the list of patient name, the doctor who treated them and the date from the database between 15th January to 11th February 2018 (both dates inclusive)

```
SELECT p_name, d_name, a_date
FROM doctor,appointment,patient
WHERE patient.p_user_id=appointment.p_user_id
AND appointment.doctor_id=doctor.doctor_id
AND appointment.a_date
BETWEEN '15-Jan-18'AND'11-Feb-18';
```
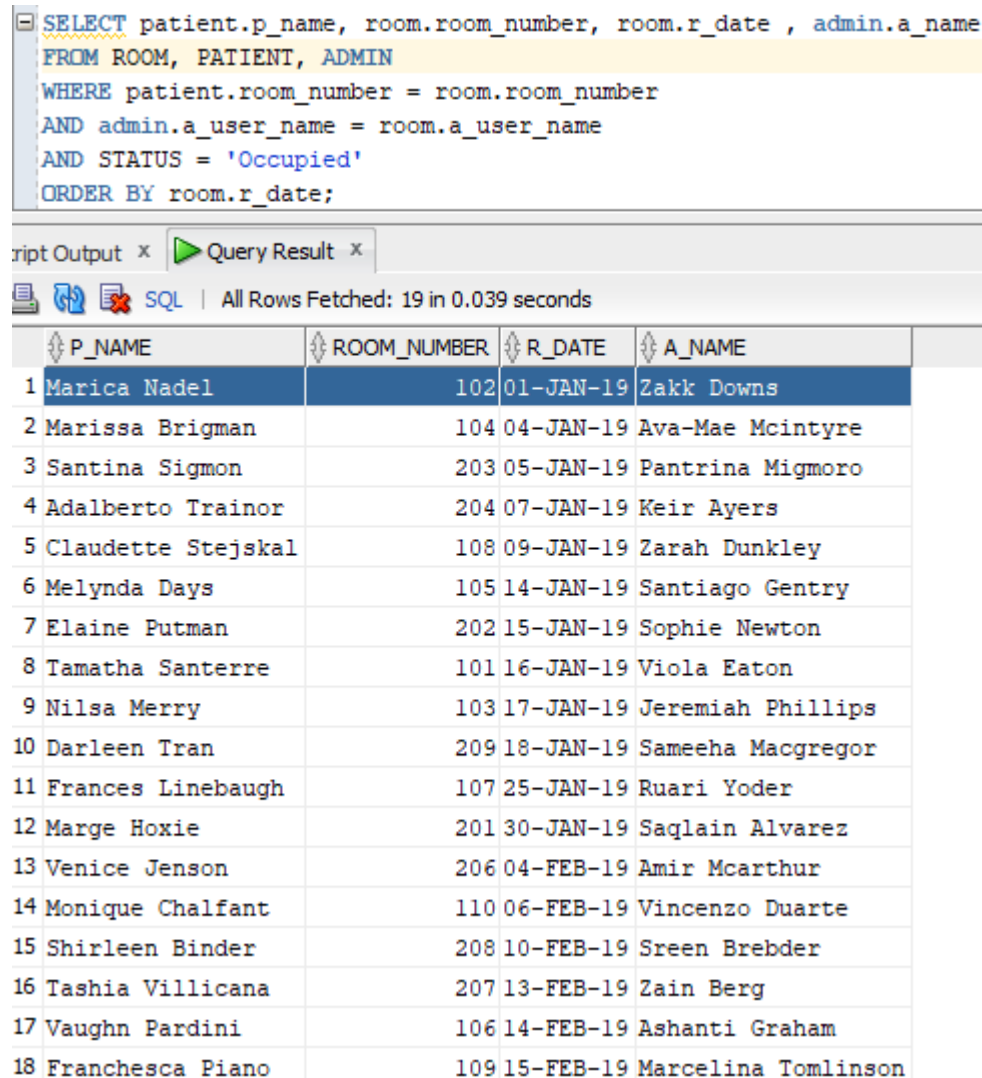
```
SELECT p_name, d_name, a_date
FROM doctor,appointment,patient
WHERE patient.p_user_id=appointment.p_user_id
AND appointment.doctor_id=doctor.doctor_id
AND appointment.a_date
BETWEEN '15-Jan-18'AND'11-Feb-18' ;
```

ript Output ×   ▶ Query Result ×

🖫 🔁 🔀 SQL | All Rows Fetched: 17 in 0.046 seconds

	P_NAME	D_NAME	A_DATE
1	Shirleen Binder	Jacob Booth	11-FEB-18
2	Santina Sigmon	Darcy Finch	27-JAN-18
3	Vaughn Pardini	Shyla Rich	20-JAN-18
4	Elaine Putman	Cathal Leal	30-JAN-18
5	Marissa Brigman	Aiesha Ferrell	23-JAN-18
6	Marge Hoxie	Loui Wong	25-JAN-18
7	Monique Chalfant	Ayaz Rocha	01-FEB-18
8	Tynisha Valenzuela	Kenzo Moyer	31-JAN-18
9	Claudette Stejskal	Deacon Farley	18-JAN-18
10	Delinda Fountain	Tracey Dickerson	26-JAN-18
11	Wiley Real	Peyton Spencer	23-JAN-18
12	Vivan Lucas	Yousif Garrison	20-JAN-18
13	Venice Jenson	Neil Mccartney	10-FEB-18
14	Nilsa Merry	Ayda Holman	16-JAN-18
15	Alina Batt	Amanah Padilla	08-FEB-18
16	Myrtle Gloria	Leena Kinney	04-FEB-18
17	Cammy Mullinix	Andy Morrison	15-JAN-18

2. Get the list of admitted patients along with the room numbers AND the admin who allocated the room on the respective date.

SELECT patient.p_name, room.room_number, room.r_date , admin.a_name
FROM ROOM, PATIENT, ADMIN
WHERE patient.room_number = room.room_number
AND admin.a_user_name = room.a_user_name
AND STATUS = 'Occupied'
ORDER BY room.r_date;

```
SELECT patient.p_name, room.room_number, room.r_date , admin.a_name
FROM ROOM, PATIENT, ADMIN
WHERE patient.room_number = room.room_number
AND admin.a_user_name = room.a_user_name
AND STATUS = 'Occupied'
ORDER BY room.r_date;
```

ript Output ˣ   ► Query Result ˣ

🖳 🔁 📇 SQL | All Rows Fetched: 19 in 0.039 seconds

	P_NAME	ROOM_NUMBER	R_DATE	A_NAME
1	Marica Nadel	102	01-JAN-19	Zakk Downs
2	Marissa Brigman	104	04-JAN-19	Ava-Mae Mcintyre
3	Santina Sigmon	203	05-JAN-19	Pantrina Migmoro
4	Adalberto Trainor	204	07-JAN-19	Keir Ayers
5	Claudette Stejskal	108	09-JAN-19	Zarah Dunkley
6	Melynda Days	105	14-JAN-19	Santiago Gentry
7	Elaine Putman	202	15-JAN-19	Sophie Newton
8	Tamatha Santerre	101	16-JAN-19	Viola Eaton
9	Nilsa Merry	103	17-JAN-19	Jeremiah Phillips
10	Darleen Tran	209	18-JAN-19	Sameeha Macgregor
11	Frances Linebaugh	107	25-JAN-19	Ruari Yoder
12	Marge Hoxie	201	30-JAN-19	Saqlain Alvarez
13	Venice Jenson	206	04-FEB-19	Amir Mcarthur
14	Monique Chalfant	110	06-FEB-19	Vincenzo Duarte
15	Shirleen Binder	208	10-FEB-19	Sreen Brebder
16	Tashia Villicana	207	13-FEB-19	Zain Berg
17	Vaughn Pardini	106	14-FEB-19	Ashanti Graham
18	Franchesca Piano	109	15-FEB-19	Marcelina Tomlinson

3. List/group the number of doctors in the hospital with respect to the specialization (E.g There are total 15 physicians, 1 dermatologist etc)?

```sql
SELECT  doctor.specialization, COUNT(*)
FROM DOCTOR
INNER JOIN APPOINTMENT ON appointment.doctor_id = doctor.doctor_id
GROUP BY doctor.specialization
ORDER BY COUNT(*) DESC;
```

cript Output ×   ▷ Query Result ×

🖨 🔁 ⓧ SQL | All Rows Fetched: 14 in 0.032 seconds

	SPECIALIZATION	COUNT(*)
1	Physician	15
2	Gynecologist	3
3	Dermatologist	1
4	Neurologist	1
5	Psychiatrist	1
6	Pulmonologist	1
7	Physician Executive	1
8	Anesthesiologist	1
9	Gastroenterologist	1
10	Endocrinologist	1
11	Radiologist	1
12	Oncologist	1
13	Obstetrician/Gynecologist (OB/GYN)	1
14	Cardiologist	1

4. Fetch the number of patients visiting Gynecologist in February?

SELECT count(patient.p_name) AS "Patient Count"
FROM PATIENT, DOCTOR, APPOINTMENT
WHERE doctor.doctor_id = appointment.doctor_id
AND patient.p_user_id = appointment.p_user_id
AND doctor.specialization
LIKE '%Gynecologist%'
AND patient.p_admit_date > '1-Feb-18'
AND patient.p_admit_date < '28-Feb-18';

```
rksheet    Query Builder
   SELECT count(patient.p_name) AS "Patient Count"
   FROM PATIENT, DOCTOR, APPOINTMENT
   WHERE doctor.doctor_id = appointment.doctor_id
   AND patient.p_user_id = appointment.p_user_id
   AND doctor.specialization
   LIKE '%Gynecologist%'
   AND patient.p_admit_date > '1-Feb-18'
   AND patient.p_admit_date < '28-Feb-18';
```

Script Output × ▶ Query Result ×

🖨 📖 📇 SQL | All Rows Fetched: 1 in 0.096 seconds

	Patient Count
1	2

5. List the patient details and the corresponding total sum of the hospital and pharmacy bill ?

SELECT patient.p_user_id, b_patient_name,(bill.b_amount + pharmacy.m_amount)
AS SUM1, patient.p_age, patient.p_phone_no, patient.p_address, patient.p_sex
FROM BILL, PATIENT, PHARMACY
WHERE bill.p_user_id = patient.p_user_id
AND pharmacy.m_bill_number=patient.m_bill_number
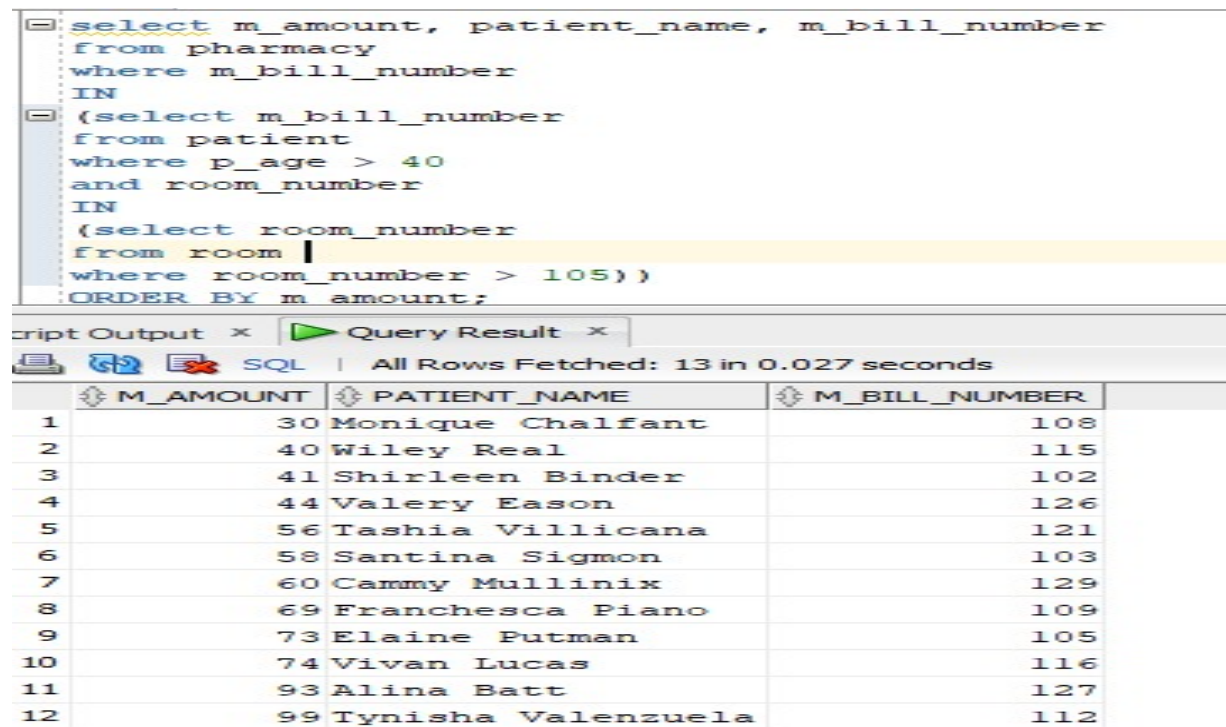ORDER BY SUM1, P_AGE desc;

```
Worksheet    Query Builder

  ⊟ SELECT  patient.p_user_id, b_patient_name,(bill.b_amount + pharmacy.m_amount)
    AS SUM1, patient.p_age, patient.p_phone_no, patient.p_address, patient.p_sex
    FROM BILL, PATIENT, PHARMACY
    WHERE bill.p_user_id = patient.p_user_id
    AND pharmacy.m_bill_number=patient.m_bill_number
    ORDER BY SUM1, P_AGE desc;
```

Script Output × ▷ Query Result ×

📌 🖨 🔁 📇 SQL | All Rows Fetched: 30 in 0.077 seconds

	P_USER_ID	B_PATIENT_NAME	SUM1	P_AGE	P_PHONE_NO	P_ADDRESS	P_SEX
1	Monique.Chalfant	Monique Chalfant	60	73	5005177513	967-254 Sodales Ave	Male
2	Nilsa.Merry	Nilsa Merry	74	78	4211065327	416-3699 Dolor, St	Male
3	Wiley.Real	Wiley Real	80	56	4122875618	Ap #505-3548 Pharetra St	Female
4	Marissa.Brigman	Marissa Brigman	98	63	6132414305	Ap #628-267 Pede. Road	Male
5	Delinda.Fountain	Delinda Fountain	110	31	4454862319	P.O. Box 185, 1163 Nunc Rd	Male
6	Tashia.Villicana	Tashia Villicana	112	76	6413593608	Ap #140-8152 Metus. Road	Female
7	Santina.Sigmon	Santina Sigmon	116	51	5611448339	5216 Consequat Avenue	Male
8	Cammy.Mullinix	Cammy Mullinix	120	72	4169281475	P.O. Box 743, 918 Fusce Rd	Male
9	Venice.Jenson	Venice Jenson	134	31	4483328702	604-2533 Massa. Rd	Male
10	Marica.Nadel	Marica Nadel	134	19	5955280287	3047 Sed Road	Male
11	Melynda.Days	Melynda Days	140	55	4163322257	9067 Sociis Road	Male
12	Claudette.Stejskal	Claudette Stejskal	168	5	4221245181	4329 Ligula Street	Female
13	Adalberto.Trainor	Adalberto Trainor	176	22	4993732780	P.O. Box 723, 6697 Et Rd	Male
14	Blanca.Rushin	Blanca Rushin	178	19	5566296318	Ap #433-9425 Augue Ave	Female
15	Darleen.Tran	Darleen Tran	184	26	4939951272	5002 A St	Female
16	Tynisha.Valenzuela	Tynisha Valenzuela	198	41	4693050461	822-5011 Quisque Rd	Female
17	Vaughn.Pardini	Vaughn Pardini	202	10	5211490471	5061 Justo Avenue	Female
18	Valery.Eason	Valery Eason	642	79	6393430256	6803 Lacus. Rd	Female
19	Alina.Batt	Alina Batt	942	78	4742950908	1597 Faucibus Rd	Female
20	Tisha.Grieves	Tisha Grieves	1009	35	5115366636	7452 Ligula. Ave	Male
21	Merlin.Shelton	Merlin Shelton	1151	14	6221852985	7357 Tincidunt Street	Female
22	Marge.Hoxie	Marge Hoxie	1675	8	5859472165	306 Elementum Av	Male
23	Elaine.Putman	Elaine Putman	1723	48	5134248239	Ap #780-9646 Ipsum Av	Female
24	Candra.Tuller	Candra Tuller	1767	56	4469918040	526-7995 Mauris Av	Male
25	Tamatha.Santerre	Tamatha Santerre	2142	61	5372210138	5976 Semper St	Female
26	Shirleen.Binder	Shirleen Binder	2148	70	4992396307	5642 Mus. Road	Male
27	Frances.Linebaugh	Frances Linebaugh	2158	30	5559888186	Ap #806-1883 Nec Road	Female
28	Franchesca.Piano	Franchesca Piano	2176	58	4619130839	Ap #251-9135 Proin Road	Female
29	Vivan.Lucas	Vivan Lucas	2181	71	5221991343	P.O. Box 577, 5454 Dis Av	Female
30	Myrtle.Gloria	Myrtle Gloria	3065	8	5822521651	Ap #567-9023 Pulvinar Av	Female

6. Display the pharmacy bill amount and number of the admitted patients along with the patient's name who age is greater than 40 and occupied the hospital room greater than 105
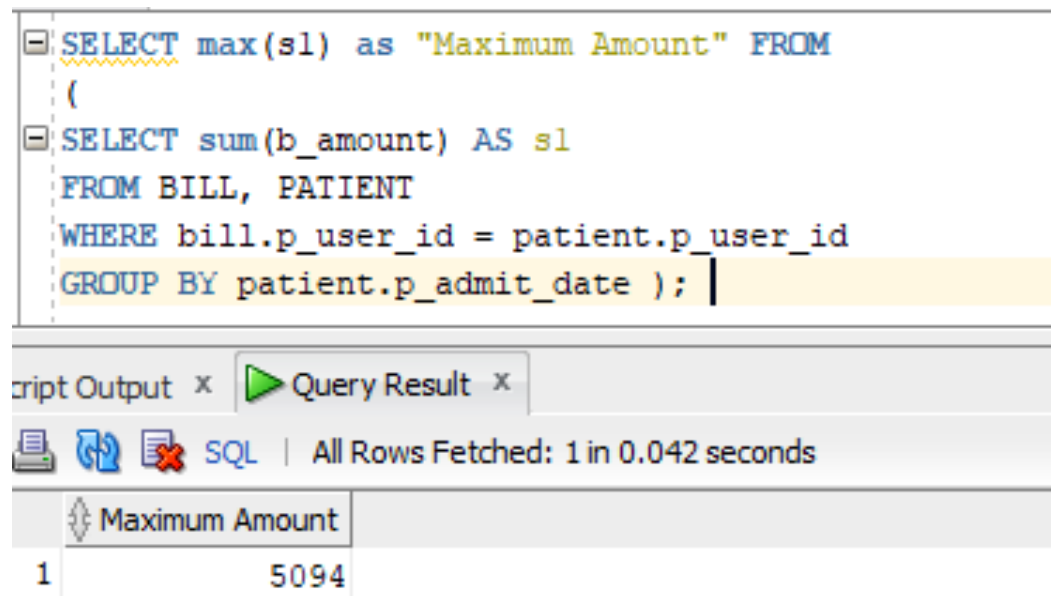
select m_amount, patient_name, m_bill_number
from pharmacy
where m_bill_number
IN
(select m_bill_number
from patient
where p_age > 40
and room_number
IN
(select room_number
from room
where room_number > 105))
ORDER BY m_amount;

```
select m_amount, patient_name, m_bill_number
from pharmacy
where m_bill_number
IN
(select m_bill_number
from patient
where p_age > 40
and room_number
IN
(select room_number
from room |
where room_number > 105))
ORDER BY m_amount;
```

cript Output ×   ► Query Result ×

SQL | All Rows Fetched: 13 in 0.027 seconds

	M_AMOUNT	PATIENT_NAME	M_BILL_NUMBER
1	30	Monique Chalfant	108
2	40	Wiley Real	115
3	41	Shirleen Binder	102
4	44	Valery Eason	126
5	56	Tashia Villicana	121
6	58	Santina Sigmon	103
7	60	Cammy Mullinix	129
8	69	Franchesca Piano	109
9	73	Elaine Putman	105
10	74	Vivan Lucas	116
11	93	Alina Batt	127
12	99	Tynisha Valenzuela	112

7.) Get the maximum bill for the hospital at a particular day which includes the sum of pharmacy bill and hospital bill?

SELECT max(s1) as "Maximum Amount" FROM
(
SELECT sum(b_amount) AS s1
FROM BILL, PATIENT
WHERE bill.p_user_id = patient.p_user_id
GROUP BY patient.p_admit_date);

```
SELECT max(s1) as "Maximum Amount" FROM
(
SELECT sum(b_amount) AS s1
FROM BILL, PATIENT
WHERE bill.p_user_id = patient.p_user_id
GROUP BY patient.p_admit_date ); |
```

cript Output ×   ▶ Query Result ×

🖨 🔃 📇 SQL | All Rows Fetched: 1 in 0.042 seconds

Maximum Amount
1	5094

NOTE : FEW FIELDS HAVE BEEN UPDATED IN THE DATABASE TO SEE THE CONSEQUENCES OF DATA QUALITY PROBLEMS

8.) Select the admin details to whom only female nurses report.
- ➢ Data quality issue in this query is phone number as it has to be a 10-digit number

UPDATE ADMIN SET a_phone_no = '9654551243454' where a_user_name='Saqlain.Alvarez@gmail.com' ;
UPDATE ADMIN SET a_phone_no = '765454543454' where a_user_name='Ashanti.Graham@gmail.com' ;
UPDATE ADMIN SET a_phone_no = '7654556743454' where a_user_name='Sophie.Newton@gmail.com' ;
COMMIT;

select a_phone_no, a_name, a_user_name, a_email, a_gender
from admin where a_user_name
IN
(select a_user_name
from nurse
where n_gender = 'Female');

```
select a_phone_no, a_name, a_user_name, a_email, a_gender
from admin where a_user_name
IN
(select a_user_name
from nurse
where n_gender = 'Female');
```

cript Output ✕ | ▶ Query Result ✕

SQL | All Rows Fetched: 30 in 0.094 seconds

	A_PHONE_NO	A_NAME	A_USER_NAME	A_EMAIL	A_GENDER
1	5005319089	Keir Ayers	Amir.Mcarthur@gmail.com	Amir.Mcarthur@gmail.com	Female
2	4278652763	Jeremiah Phillips	Annabell.Hudson@gmail.com	Annabell.Hudson@gmail.com	Male
3	4365056010	Oliwia Galindo	Arley.Sanders@gmail.com	Arley.Sanders@gmail.com	Male
4	765454543454	Ashanti Graham	Ashanti.Graham@gmail.com	Ashanti.Graham@gmail.com	Male
5	7654556743454	Ava-Mae Mcintyre	Ava-Mae.Mcintyre@gmail.com	Ava-Mae.Mcintyre@gmail.com	Male
6	4706575645	Cendy Pecker	Cendy.Pecker@gmail.com	Cendy.Pecker@gmail.com	Male
7	5864299125	Sameeha Macgregor	Jeremiah.Phillips@gmail.com	Jeremiah.Phillips@gmail.com	Male
8	4541915461	Marcel Schofield	Katharine.Koch@gmail.com	Katharine.Koch@gmail.com	Male
9	4294498673	Viola Eaton	Keir.Ayers@gmail.com	Keir.Ayers@gmail.com	Female
10	5204327248	Arley Sanders	Lilly-Mai.Wills@gmail.com	Lilly-Mai.Wills@gmail.com	Male
11	5395275961	Zarah Dunkley	Marcel.Schofield@gmail.com	Marcel.Schofield@gmail.com	Female
12	4998199345	Marcelina Tomlinson	Marcelina.Tomlinson@gmail.com	Marcelina.Tomlinson@gmail.com	Male
13	4315908837	Santiago Gentry	Nancie.Pope@gmail.com	Nancie.Pope@gmail.com	Male
14	4774542998	Zakk Downs	Oliwia.Galindo@gmail.com	Oliwia.Galindo@gmail.com	Female
15	5356541234	Pantrina Migmoro	Pantrina.Migmoro@gmail.com	Pantrina.Migmoro@gmail.com	Female
16	5156548021	Ruari Yoder	Ruari.Yoder@gmail.com	Ruari.Yoder@gmail.com	Male
17	4936625138	Zain Berg	Sameeha.Macgregor@gmail.com	Sameeha.Macgregor@gmail.com	Female
18	9654551243454	Saqlain Alvarez	Saqlain.Alvarez@gmail.com	Saqlain.Alvarez@gmail.com	Female

9.) Select patient name and the pharmacy bill amount from the table where the discharge date is less than the admit date
  - ➢ Data quality issue is admit date in this query as the admit date cannot be greater than the discharge date.

UPDATE PATIENT SET PT_ADMIT_DATE = '14-FEB-18' where p_user_id = 'Frances.Linebaugh';
UPDATE PATIENT SET PT_ADMIT_DATE = '27-FEB-18' where p_user_id = 'Candra.Tuller';
UPDATE PATIENT SET PT_ADMIT_DATE = '21-JAN-18' where p_user_id = 'Elaine.Putman';
commit;

select patient.p_name, patient.pt_admit_date, patient.pt_discharge_date,
pharmacy.m_amount, room.room_number
from patient, pharmacy, room
where room.room_number = patient.room_number
and pharmacy.m_bill_number = patient.m_bill_number
and patient.pt_discharge_date < patient.pt_admit_date
ORDER BY patient.pt_admit_date DESC;

```
select patient.p_name, patient.pt_admit_date, patient.pt_discharge_date, pharmacy.m_amount, room.room_number
from patient, pharmacy, room
where room.room_number = patient.room_number
and pharmacy.m_bill_number = patient.m_bill_number
and patient.pt_discharge_date < patient.pt_admit_date
ORDER BY patient.pt_admit_date DESC;
```

uery Result ✕

SQL | All Rows Fetched: 3 in 0.026 seconds

	P_NAME	PT_ADMIT_DATE	PT_DISCHARGE_DATE	M_AMOUNT	ROOM_NUMBER
1	Candra Tuller	27-FEB-18	20-FEB-18	117	309
2	Frances Linebaugh	14-FEB-18	12-FEB-18	51	107
3	Elaine Putman	21-JAN-18	17-JAN-18	73	202

10.) Display the details of the nurses who stays in Massachusetts i.e. MA and their corresponding admins whom they report to.
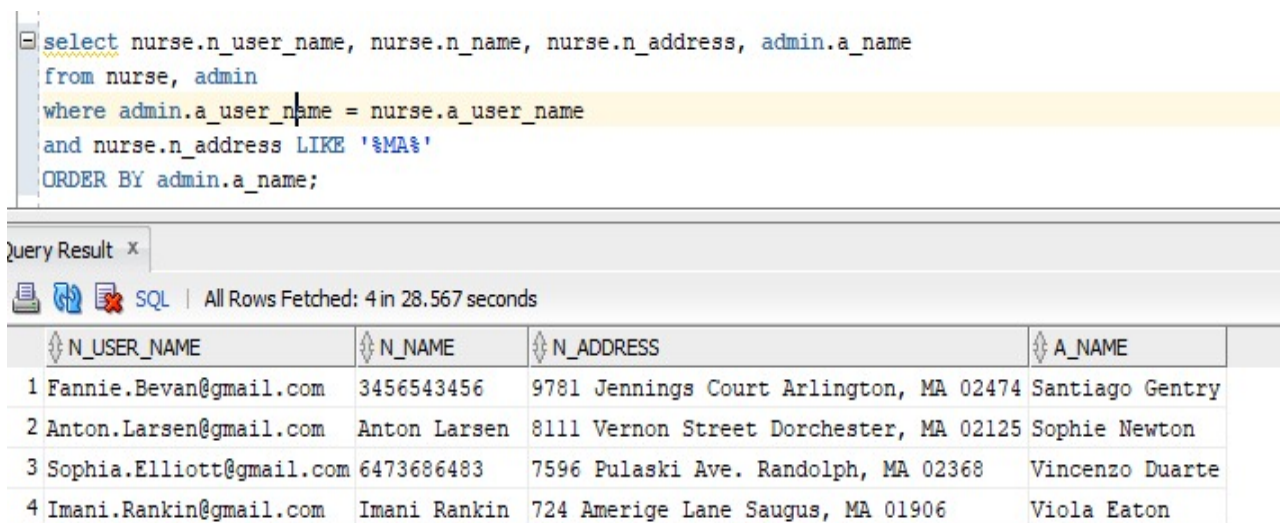
➢ Data quality issue in this query is the name of nurse because name cannot be an integer.

UPDATE NURSE SET n_name = '34567' where n_user_name = 'Rima.Pike@gmail.com';
commit;
UPDATE NURSE SET n_name = '6473686483' where n_user_name = 'Sophia.Elliott@gmail.com';
UPDATE NURSE SET n_name = '3456543456' where n_user_name = 'Fannie.Bevan@gmail.com';

select nurse.n_user_name, nurse.n_name, nurse.n_address, admin.a_name
from nurse, admin
where admin.a_user_name = nurse.a_user_name
and nurse.n_address LIKE '%MA%'
ORDER BY admin.a_name

```
select nurse.n_user_name, nurse.n_name, nurse.n_address, admin.a_name
from nurse, admin
where admin.a_user_name = nurse.a_user_name
and nurse.n_address LIKE '%MA%'
ORDER BY admin.a_name;
```

Query Result ✕

🖨 🔄 📤 SQL | All Rows Fetched: 4 in 28.567 seconds

	N_USER_NAME	N_NAME	N_ADDRESS	A_NAME
1	Fannie.Bevan@gmail.com	3456543456	9781 Jennings Court Arlington, MA 02474	Santiago Gentry
2	Anton.Larsen@gmail.com	Anton Larsen	8111 Vernon Street Dorchester, MA 02125	Sophie Newton
3	Sophia.Elliott@gmail.com	6473686483	7596 Pulaski Ave. Randolph, MA 02368	Vincenzo Duarte
4	Imani.Rankin@gmail.com	Imani Rankin	724 Amerige Lane Saugus, MA 01906	Viola Eaton