ASSIGNMENT 4

Tables in 1st Normal Form (1NF):

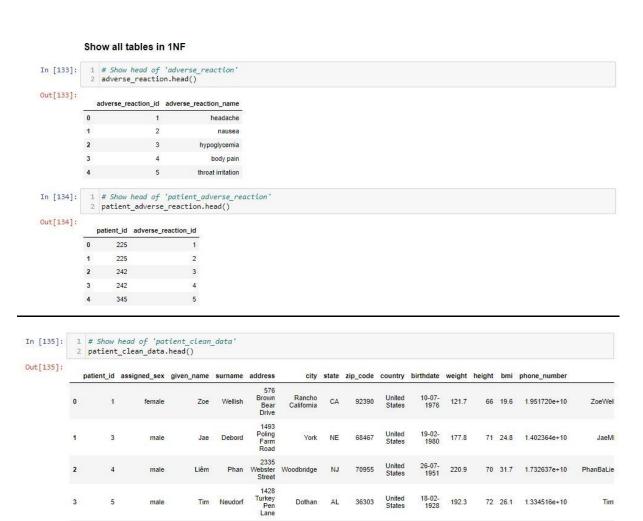
4

4

6

male

Rafael



FL

32114

183.9

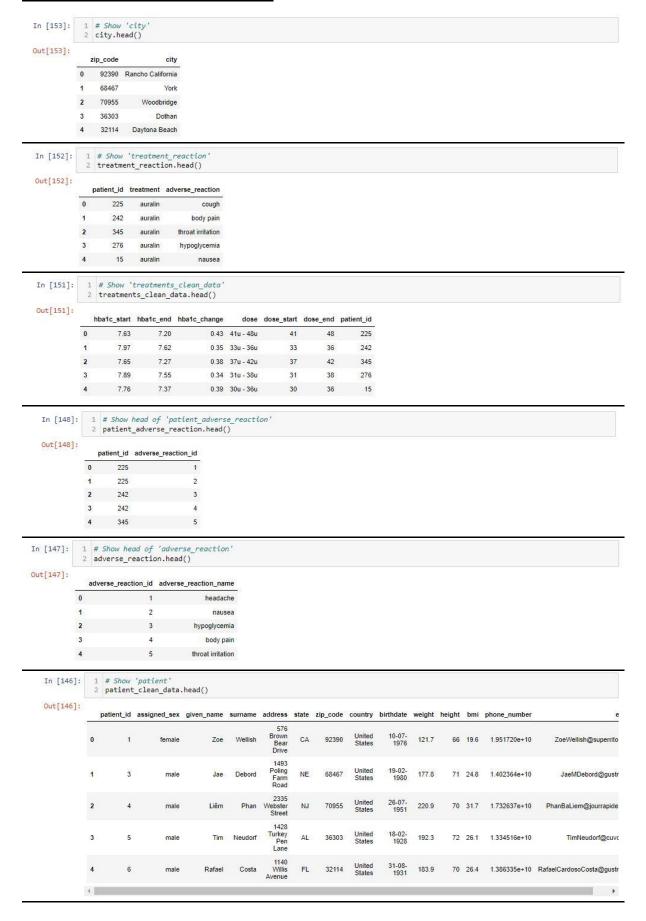
70 26.4 1.386335e+10 RafaelCardos

1140 Willis Avenue

Tables in 2nd Normal Form (2NF):

Show all tables in 2NF In [136]: 1 # Show patient_clean_data 2 patient_clean_data.head() Out[136]: patient_id assigned_sex given_name surname address city state zip_code country birthdate weight height bmi phone_number 576 Brown Bear Drive 92390 121.7 66 19.6 1.951720e+10 ZoeWel 1493 Poling Farm Road 3 68467 177.8 71 24.8 1.402364e+10 male Debord York NE JaeMi 2335 male Liêm Phan Woodbridge NJ 70955 220.9 70 31.7 1.732637e+10 PhanBaLie 1428 Turkey Pen Lane 3 5 Dothan male Tim Neudorf AL 36303 192.3 72 26.1 1.334516e+10 Tim 1140 Willis Avenue Daytona Beach United States 31-08-1931 male Rafael Costa FL 32114 183.9 70 26.4 1.386335e+10 RafaelCardos 4 # Show head of 'patient_adverse_reaction' patient_adverse_reaction.head() In [123]: Out[123]: patient_id adverse_reaction_id 0 225 225 2 2 242 3 242 345 In [124]: 1 # Show head of 'adverse_reaction' 2 adverse_reaction.head() Out[124]: adverse_reaction_id adverse_reaction_name headache 1 3 hypoglycemia 3 4 body pain 5 throat irritation 1 # Show 'treatments_clean_data' In [125]: 2 del treatments_clean_data['treatment'] 3 del treatments_clean_data['adverse_reaction'] 4 treatments_clean_data.head() Out[125]: hba1c start hba1c end hba1c change dose dose start dose end patient id 7.20 0.43 41u - 48u 41 225 0 7.63 48 0.35 33u - 36u 7.65 7.27 0.38 37u - 42u 37 42 345 3 7.89 7.55 0.34 310 - 380 31 38 276 7.37 30 7.76 0.39 30u - 36u 36 In [126]: 1 # Show 'treatment_reaction' 2 treatment_reaction.head() Out[126]: patient_id treatment adverse_reaction 225 cough 242 auralin body pain 345 auralin throat irritation 276 auralin hypoglycemia 4 15 auralin

Tables in 3rd Normal Form (3NF):



View for all the use cases:

Which user posted this tweet?

```
#Which user posted this tweet?
123
        SELECT Twitter_handle, tweet_text FROM tweets WHERE tweet_id = "1111";
125
126 • DROP VIEW users tweet;
127 • CREATE VIEW users_tweet AS
128
        SELECT tweets.Twitter_handle, tweets.tweet_text
129
         FROM tweets
130
         JOIN user ON (tweets.Twitter_handle = user.Twitter_handle)
         WHERE tweet_id = "1111";
133 •
        SELECT * FROM users_tweet;
Export: Wrap Cell Content: IA
   Twitter_handle tweet_text
▶ @TomFitton
               Brigham and Womens Hospital Harvest and sale...
```

When did the user post this tweet?

```
#When did the user post this tweet?
        SELECT Twitter_handle, created_at FROM tweets WHERE Twitter_handle = "@boston25";
136 •
137
138 • CREATE VIEW tweet_posted AS
139
        SELECT tweets.Twitter_handle, tweets.created_at
140
        FROM tweets
        JOIN tweet_tags ON (tweets.tweet_id = tweet_tags.tweet_id)
        WHERE Twitter handle = "@boston25";
142
143
144 •
        SELECT * FROM tweet_posted;
Export: Wrap Cell Content: IA
   Twitter_handle created_at
@boston25
              2022-11-23 06:45:00
```

What tweet has the user posted in last 24 hours?

```
#What tweet has the user posted in last 24 hours?
147 •
        SELECT * FROM tweets WHERE Twitter_handle = "@TomFitton" AND created_at > '2022-11-22 10:05:10';
148
149 • CREATE VIEW posted_tweet AS
150
        SELECT tweets.tweet_id, tweets.Twitter_handle, tweets.created_at
151
152
        JOIN tweet_tags ON (tweets.tweet_id = tweet_tags.tweet_id)
        WHERE Twitter_handle = '@TomFitton' AND created_at > '2022-11-22 10:05:10';
153
354
        SELECT * FROM posted_tweet;
155 •
                                       Export: Wrap Cell Content: IA
tweet_id Twitter_handle created_at
11111
           @TomFitton
                       2022-11-23 00:00:00
```

How many users have followers more than 3 Million?



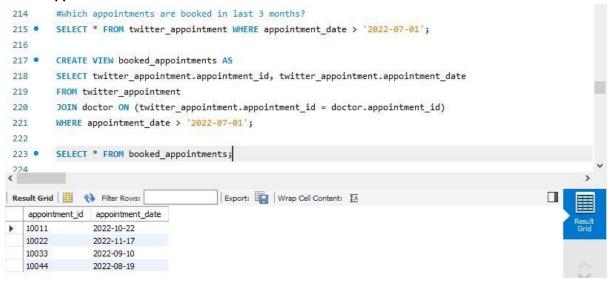
Are there any users who mentioned about Womens Hospital?



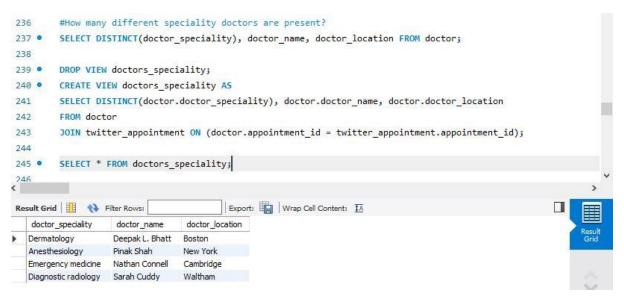
Which doctor is a male dermat specialist?



Which appointments are booked in last 3 months?



How many different speciality doctors are present?



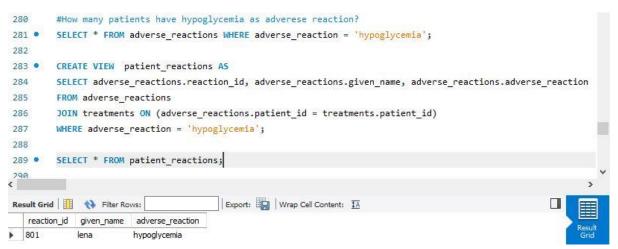
How many Female doctors are there in the hospital?

```
247
        #How many Female doctors are there in the hospital?
248
        SELECT DISTINCT(doctor_gender) , doctor_name FROM doctor WHERE doctor_gender = "Female";
249
250 •
        CREATE VIEW doctor_genders AS
        SELECT DISTINCT(doctor.doctor_gender), doctor.doctor_name
251
252
        FROM doctor
253
        JOIN twitter_appointment ON (doctor.appointment_id = twitter_appointment.appointment_id)
254
        WHERE doctor_gender = 'Female';
255
256 •
        SELECT * FROM doctor_genders;
Export: Wrap Cell Content: 🖽
   doctor_gender doctor_name
▶ Female
               Sarah Cuddy
```

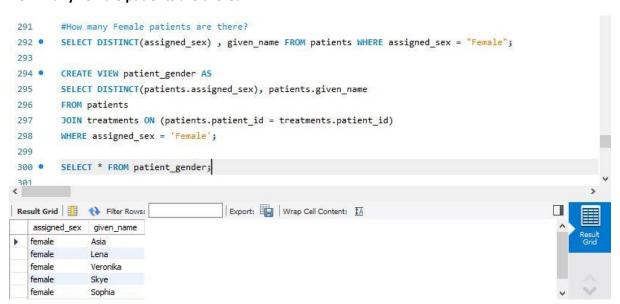
How many Male patients are there?

```
269
        #How many Male patients are there?
270 •
        SELECT DISTINCT(assigned_sex) , given_name FROM patients WHERE assigned_sex = "Male";
271
272 •
        CREATE VIEW patients gender AS
        SELECT DISTINCT(patients.assigned sex), patients.given name
273
274
        FROM patients
275
        JOIN treatments ON (patients.patient_id = treatments.patient_id)
        WHERE assigned_sex = 'Male';
276
277
278 •
        SELECT * FROM patients_gender;
                                       Export: Wrap Cell Content: IA
assigned_sex given_name
▶ male
              Eddie
```

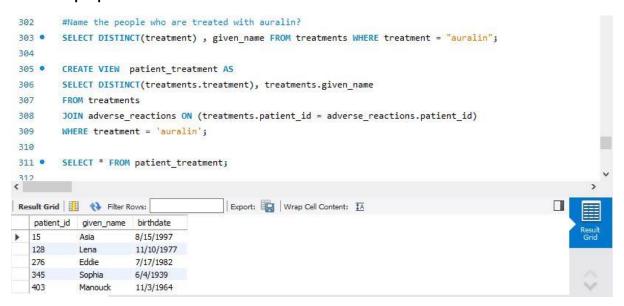
How many patients have hypoglycemia as adverese reaction?



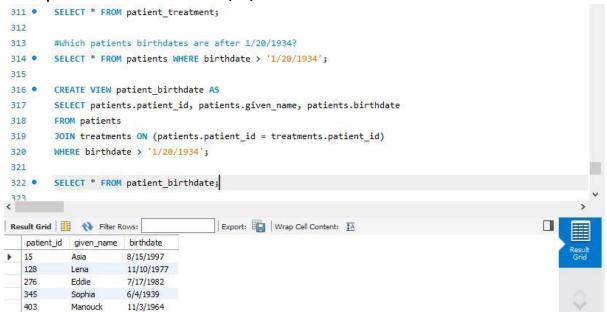
How many Female patients are there?



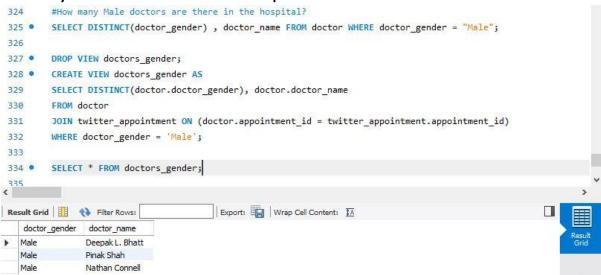
Name the people who are treated with auralin?



Which patients birthdates are after 1/20/1934?



How many Male doctors are there in the hospital?



#Which doctor is a Female Diagnostic radiology specialist?

