Lab_10

202003018

202003019

Views

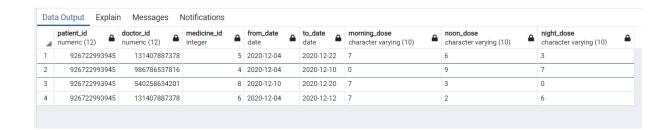
• Patient Prescription (Total)

Create View patient_prescription As

Select * from prescription where patient id = X

Create View patient_prescription As

Select * from prescription where patient_id = 926722993945



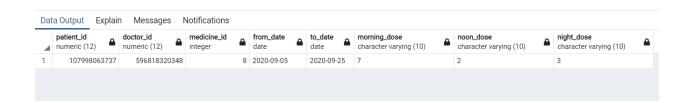
Prescription from a particular Doctor to a Patient

Create View patient doctor prescription As

Select * from prescription where patient_id = X and doctor_id = Y

Create View patient_doctor_prescription As

Select * from prescription where patient_id = 107998063737 and doctor_id = 596818320348



 Available medicines(cost_per_unit,medicine name, amount in unit, company name, amount available)

Create View available_meidcines As
Select * from medicines

4	medicine_id integer	medicine_name character varying (40)	numeric (8,2)	amount_in_unitates smallint	amount_available_integer	company_name character varying (40)
1	1	Lithium Carbonate	185.00	10	56	Krajcik Inc
2	2	Staples Instant Hand Sanitizer	715.00	20	65	Osinski Group
3	3	Hand Cleanser	236.00	20	43	Heller Group
4	4	Dexilant	275.00	5	100	Bins-Jacobi
5	5	Naproxen	460.00	10	49	Leuschke and Sons
6	6	MICRELL Sp	200.00	12	25	Aufderhar Inc
7	7	Less Relief	590.00	10	67	Lehner-Thompson
8	8	Levofloxacin	920.00	5	49	Hayes LLC
9	9	hyoscyamine sulfate	975.00	5	87	Kreiger-Greenholt
10	10	METFORMIN HYDROCHLORIDE	200.00	10	50	Hauck, Lowe and Steube

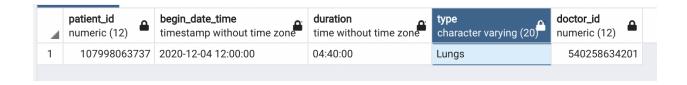
• operations done by a particular doctor

Create View operation_doctor As

Select * from operation where doctor id = X

Create View operation_doctor As

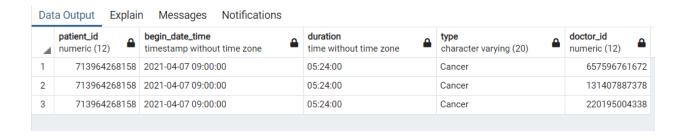
Select * from operation where doctor_id = 540258634201



• Operation of a patient = X

Create View operation_patient As Select * from operation where patient id = X

Create View operation_patient As Select * from operation where patient_id = 713964268158



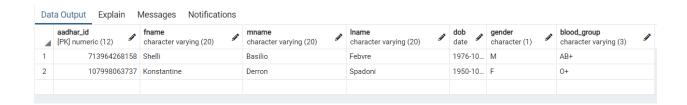
Queries

• Given a doctor id = X, one can obtain the data of patients which have been operated by him/her in an operation.

 π aadhar_id, fname, mname, lname, dob, gender, blood_group (σ doctor_id = x (operation \bowtie <operation.patient_id=patient_details.aadhar_id> patient_details))

select aadhar_id, fname,mname,lname, dob, gender, blood_group from operation join patient_details on operation.patient_id = patient_details.aadhar_id where doctor_id = X

select aadhar_id, fname,mname,lname, dob, gender, blood_group from operation join patient_details on operation.patient_id = patient_details.aadhar_id where doctor_id = '220195004338'

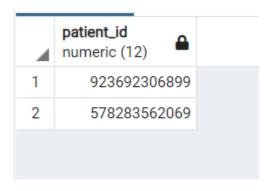


• One can get list of patients with similar disease = 'X'.

$$\pi_{patient_id}$$
 ($\sigma_{upper(disease) = 'X'}$ (patient_disease))

select patient_id from patient_disease where upper(disease) = 'X'

select patient_id from patient_disease where upper(disease) =
'DENGUE'



One can know in how much amount a medicine with medicine id
 X is available in the hospital.

 $\pi_{medicine_id,amount_in_unit,amount_available}$ ($\sigma_{medicine_id=X}$ (medicines))

select medicine_id, amount_in_unit, amount_available from medicines
where medicine_id = X;

select medicine_id, amount_in_unit, amount_available from medicines
where medicine_id = 4;

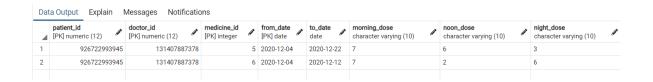
Dat	a Output	Expla	in Messages	No	otifications	
4	medicine_i [PK] intege	-	amount_in_unit smallint	Ø.	amount_available integer	Ø.
1		4		5		100

• Prescriptions mentioned by the doctor id = X to the patien tid = Y will be saved and will be accessible to patients and nurses.

σ doctor_id = X and patient_id = Y (prescription)

select * from prescription where doctor_id = X and patient_id = Y

select * from prescription where doctor_id = 131407887378 and patient_id = 926722993945



• Given a doctor id = X one can obtain all the details of that doctor.

 $\sigma_{doctor_{id} = X}$ (doctor)

select * from doctor where aadhar_id = X

select * from doctor where aadhar_id = 131407887378



 Given a patient id = X one can find if he is currently admitted or not. (To check by running on the data)

 $\sigma_{aadhar_id} = x_{and days_admitted is Null}$ (patient_records)

Select * from patient_records where aadhar_id = X and days_admitted IS NULL

Select * from patient_records where aadhar_id = 760724389956 and days_admitted IS NULL

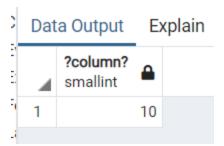
Dat	a Output Explain N	Messages Notifica	tions		
4	aadhar_id [PK] numeric (12)	mobile_number bigint	date_of_admit [PK] date	type boolean	days_admitted integer
1	760724389956	5317231019	2021-10-06	true	[null]

• One can find number of empty beds for a given room_no = X.

$$\pi$$
 number_of_beds - number_of_beds_occupied (σ room_no = x(room))

Select number_of_beds - number_of_beds_occupied from room where room_no = X

Select number_of_beds - number_of_beds_occupied from room where room_no = 1

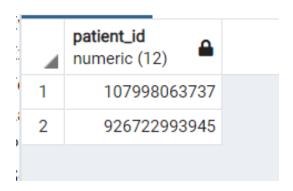


• One can find patients who are given a particular medicine.

 $\pi_{patient_id}$ ($\sigma_{medicine_id=X}$ (prescription))

Select patient_id from prescription where medicine_id = X

Select patient_id from prescription where medicine_id = 6

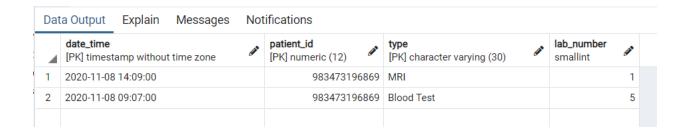


• By the patient ID, one can get the details of his/her lab tests.

 $\sigma_{patient_id = X}$ (lab_reports)

select * from lab_reports where patient_id = X

select * from lab_reports where patient_id = 983473196869

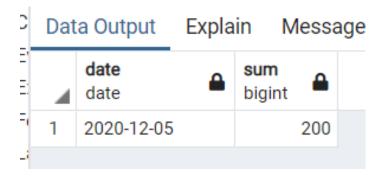


 Using patient ID = X, one can find amount of blood transfused for a given date = Y.

Date $\mathcal{F}_{date,Sum(amount_ml)}(\sigma_{patient_id} = x_{and date} = y(blood_transfusion))$

select date, Sum(amount_ml) from blood_transfusion where patient_id
= X and date = Y Group by date

select date, Sum(amount_ml) from blood_transfusion where patient_id = 926722993945 and date = '05/12/2020' Group by date



• One can obtain patients with same blood group.

σ blood group = x (patient_details)

select * from patient_details where blood_group = X

select * from patient_details where blood_group = 'B-'



• One can find amount of blood (blood group = X) currently available in blood bank.

 $\pi_{date,X}$ ($\sigma_{date = (cast GETDATE() as Date)}$ (blood_bank))

select date, X from blood_bank where date = current_date

select date, a pos ml from blood bank where date = current date

=: =:	4	date [PK] date		a_pos_ml integer	G ³	
=(1	2021-10-29)	16	6979	
-4						
2						

• We can get patient details who are admitted in a particular room.

patient_details SEMI-INTERSECTION $_{aadhar_id} = patient_id > (\sigma_{room_no} = x)$ (admitted_patients_ids))

select * from patient_details where aadhar_id in (select patient_id
from admitted_patients_ids where room_no = X)

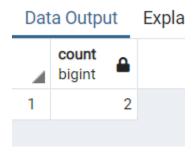
select * from patient_details where aadhar_id in (select patient_id
from admitted_patients_ids where room_no = 1)



• We can find number of patients which are currently admitted in the hospital.

$$\mathcal{F}_{Count(*)}(\sigma_{days_admitted\ IS\ NULL}(patient_records))$$

select count(*) from patient_records where days_admitted is NULL select count(*) from patient_records where days_admitted is NULL



 We can get details of all the patient who have done lab tests from a particular lab

$$\pi_{patient_id}$$
 ($\sigma_{lab_no=X}$ ($lab_reports$))

Select patient id from lab reports where lab number= X

Select patient_id from lab_reports where lab_number = 51

Dat	a Output	Explair	n Mes
4	patient_id numeric (1	2)	
1	71396	4268158	
2	926722	2993945	

• We can find details of all the lab tests of a specific date.

$$\sigma_{date = X}$$
 (lab_reports)

Select * from lab_reports where cast(date_time as DATE) = X

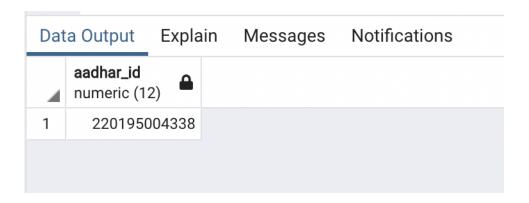
Select * from lab_reports where cast(date_time as DATE) = '04/12/2020'



 We get details of doctors which were present in every operation of a patient id = X.

Select aadhar_id from doctor except

```
(Select id from
(Select doctor.aadhar id as id, O.begin date time from doctor cross
join (select * from operation where patient_id = X) as O
except
Select doctor_id, begin_date_time from operation where patient_id = X
) as D
Select aadhar id from doctor
except
(Select id from
(Select doctor.aadhar_id as id, O.begin_date_time from doctor cross
join
(select * from operation where patient id = 713964268158) as O
except
Select doctor id, begin date time from operation where patient id =
713964268158
) as D
```



• We can get the total amount of bills which are unpaid for a particular patient.

```
patient_id\mathcal{F} patient_id, (Sum(medicine_charges) + Sum(operation_charges) + Sum(blood_t_charges) + Sum(lab_charges)) \rightarrow total) (\sigma patient_id = X and status = false( bill ))
```

Select patient_id,Sum(medicine_charges) + Sum(operation_charges) + Sum(blood_t_charges) + Sum(lab_charges) + Sum(service_charges) as Total From bill where patient_id = X and status = false group by patient_id

Select patient_id,Sum(medicine_charges) + Sum(operation_charges) + Sum(blood_t_charges) + Sum(lab_charges) + Sum(service_charges) as Total from bill where patient_id = 618290147720 and status = false group by patient_id

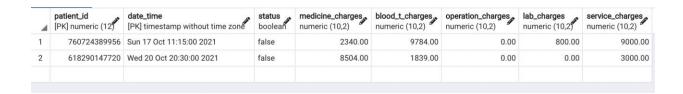
A	patient_id numeric (12	. Δ	n Mess total numeric	_ _
_	618290	147720	3434	3.00

• We can get the details of the bills which are unpaid.

$$\sigma_{\text{status} = \text{false}}(\text{bill})$$

select * from bill where status = false

select * from bill where status = false



 We can get the patients whose unpaid amount of bill is greater than amount X

$$patient_details \ SEMI-INTERSECTION_{$$

$$\rho(R, \ \pi_{\ patient_id})$$

```
patient id{\mathcal F} patient id, (Sum(medicine charges) + Sum(operation charges) + Sum(blood t charges) +
Sum(lab\_charges)) \rightarrow total) ( \textbf{O} (Sum(medicine\_charges) + Sum(operation\_charges) + Sum(blood\_t\_charges) ) 
+ Sum(lab charges)) > X and status = false( bill ))))
select * from patient_details where aadhar_id in
(select patient id from
(Select patient id, (Sum (medicine charges) + Sum (operation charges) +
Sum(blood t charges) + Sum(lab charges) + Sum(service charges)) as
Total
From bill where status = false Group by patient id Having
(Sum(medicine charges) + Sum(operation charges) +
Sum(blood t charges) + Sum(lab charges) + Sum(service charges)) >
X)
as R)
select * from patient details where aadhar id in
(select patient id from
(Select patient id,(Sum(medicine charges) + Sum(operation charges) +
Sum(blood t charges) + Sum(lab charges) + Sum(service charges)) as
Total from bill where status = false group by patient id Having
(Sum(medicine charges) + Sum(operation charges) +
Sum(blood t charges) + Sum(lab charges) + Sum(service charges)) >
30000) as R)
```

	aa	dhar_id		dob		gender		fname		mname	Iname		blood_group
	⊿ [PI	dhar_id <] numeric (1	2)	date	SAL	character (1)	Sale Control	character varying (20)	G	character varying (20)	character varying (20)	S	character varying (3)
1		6182	90147720	08-10-	-1	F		Annetta		Rollie	Dowley		B-