**SQL QUERIES**

**1. Views**

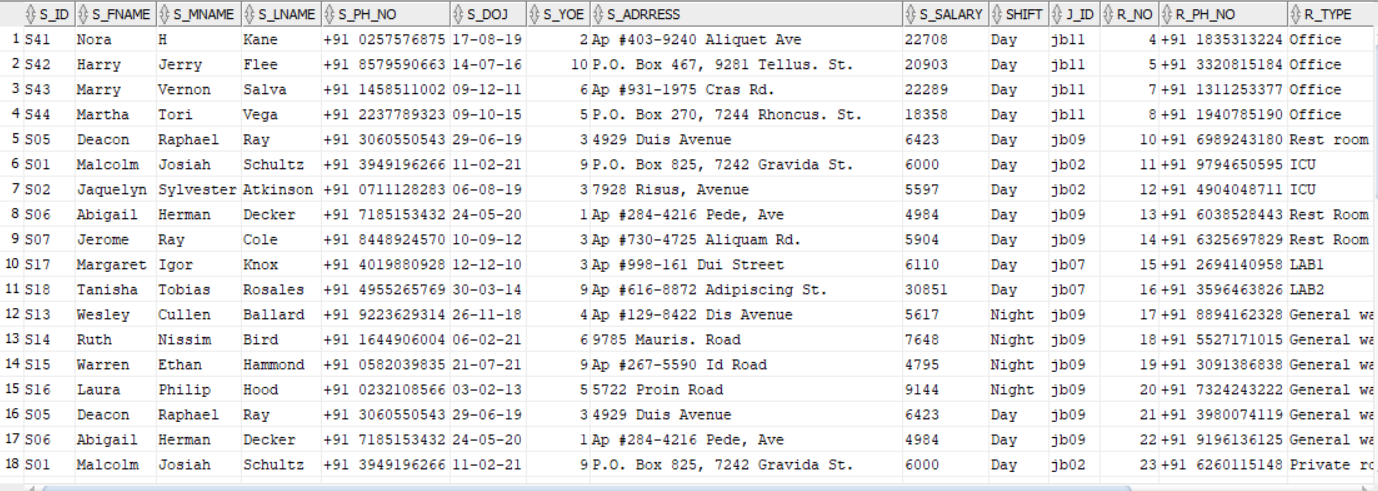
**1] retrive the name and id of insurance**

CREATE VIEW INSURANCE1\_VIEW AS

SELECT i\_id, i\_name

FROM insurance;

select \* from INSURANCE1\_VIEW ;



(49 rows)

**2] display the room numbers to which staff Molly is appointed**

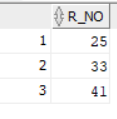
CREATE VIEW medTest5 as

SELECT R\_NO

FROM room r, staff s

WHERE r.s\_id=s.s\_id and s.S\_Fname like '%Molly%';

select \* from medTest5 ;



**3] patient who will be treated by MacKenzie**

CREATE VIEW DoctorPatient as

SELECT P\_Fname,P\_Lname

FROM patient p, prescription pr

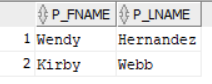
WHERE p.P\_ID=pr.P\_ID

and pr.s\_id in(select pr.s\_id

from staff s, prescription pr

where pr.s\_id=s.s\_id AND s.S\_Fname like '%MacKenzie%');

select \* from DoctorPatient ;



**4] staff who has salary greater than 5000**0

CREATE VIEW staffSal1 as

SELECT s\_id,S\_Fname,S\_Lname

FROM staff s

WHERE s.S\_Salary > 50000;

select \* from staffSal1 ;



5**] display the patient record id to whom nurse mallcom was allocated**

CREATE VIEW PatientNurse as

SELECT rec\_id

FROM patient\_record pa, Room r

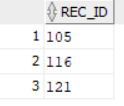
WHERE pa.R\_NO=r.R\_NO

and r.s\_id in(select r.s\_id

from staff s, Room r

where r.s\_id=s.s\_id AND s.S\_Fname like '%Malcolm%');

select \* from PatientNurse ;



**6] retrive all the names of staff who are Radiologist**

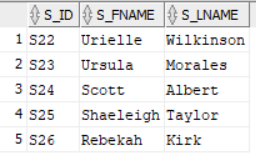
CREATE VIEW JOBTS as

SELECT s\_id,S\_Fname,S\_Lname

FROM staff s , jobtype j

WHERE s.J\_id= j.J\_id and j.J\_name like '%Radiologist%';

select \* from JOBTS ;



7] **staff who will prescribe medicine Lovastatin**

CREATE VIEW DoctorPrescription1 as

SELECT S\_Fname,S\_Lname

FROM staff s, test t

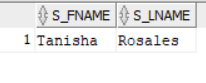
WHERE s.s\_id = t.s\_id

and t.PR\_ID in(select t.PR\_ID

from test t, prescription pr

where t.PR\_ID=pr.PR\_ID AND pr.Med\_name like '%Cephalexin%');

select \* from DoctorPrescription1;



8] **display the patients full name who have taken Lic insurance**

CREATE VIEW patientINS as

SELECT P\_Fname,P\_Lname

FROM insurance i, patient p

WHERE i.i\_id=p.i\_id and i.i\_name like '%LIC%';

select \* from patientINS ;



9**] display the tests conducted by staff of name Micah**

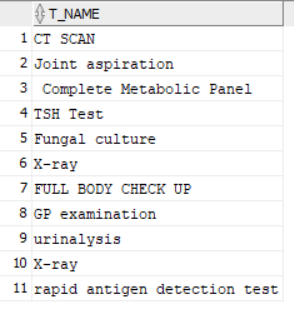
CREATE VIEW staffTest1 as

SELECT T\_name

FROM test t, staff s

WHERE t.s\_id=s.s\_id and s.S\_Fname like '%Micah%';

select \* from staffTest1 ;



10**] display the tests after which Amlodipine Besylate medicine needs to be taken**

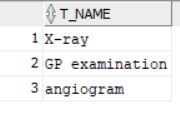
CREATE VIEW medTest2 as

SELECT T\_name

FROM test t, prescription pr

WHERE t.PR\_ID=pr.PR\_ID and pr.Med\_name like '%Amlodipine Besylate%';

select \* from medTest2 ;



**2. Sub Queries**

**1]display the 3rd lowest salary of the staff.**

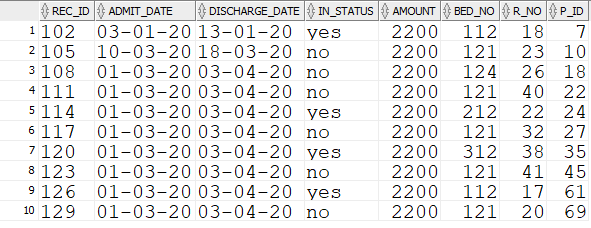
SELECT S\_Salary FROM staff a1 WHERE 3-1= (SELECT COUNT(DISTINCT S\_Salary) FROM staff a2 WHERE a2.S\_Salary > a1.S\_Salary);



**2] Find the patient who paid highest when admitted**

SELECT \* FROM patient\_record pr

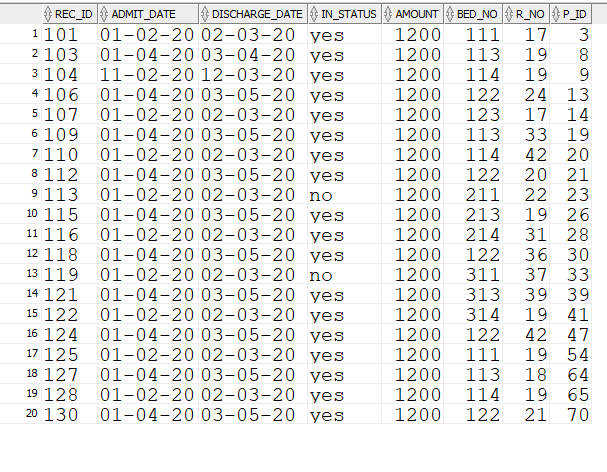
WHERE pr.amount>=ALL(SELECT patient\_record.amount FROM patient\_record);



3] **Find the patient who paid least when admitted**

SELECT \* FROM patient\_record pr

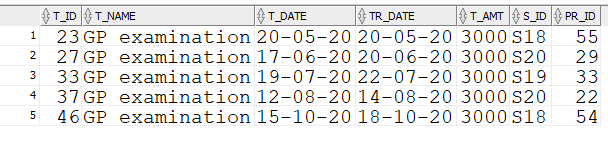
WHERE pr.amount<=ALL(SELECT patient\_record.amount FROM patient\_record);



**4] Display the test details which is the costliest**

SELECT \* FROM test t

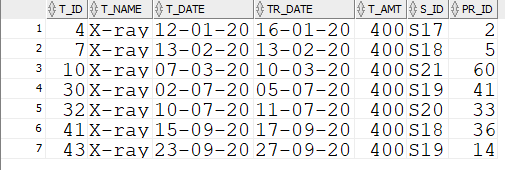
WHERE t.t\_amt>=ALL(SELECT test.t\_amt FROM test);



5**] Display the test details which is the cheapiest**

SELECT \* FROM test t

WHERE t.t\_amt<=ALL(SELECT test.t\_amt FROM test);



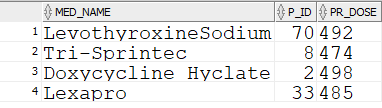
**6] display med name , patient id and dose prescribed when dose>470**

select med\_name, p\_id,pr\_dose

from prescription

where p\_id IN (select p\_id from patient where pr\_dose>470)

order by (pr\_id);



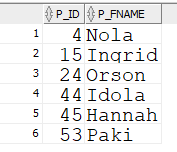
**7]Display the patient id and first name if thier insurance amount is greater than 50000**

select p\_id, p\_fname

from patient

where i\_id IN (select i\_id from insurance where i\_amount < 50000)

order by (p\_id);



**8]Display patient id and name admitted in general ward room number 19**

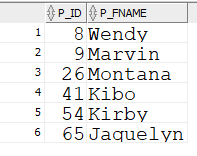
select p\_id,p\_fname

from patient

where p\_id IN (select p\_id

from patient\_record

where r\_no=19);



**9]Display patient id and name who where tested by staff member having id S21**

select p\_id,p\_fname

from patient

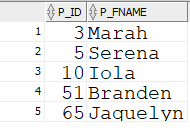
where p\_id IN (select p\_id

from prescription

where pr\_id IN (select pr\_id

from test

where s\_id='S21'));

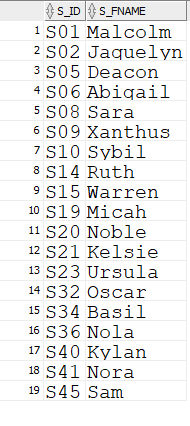


10]Display staff is and name who joined since 2019

select s\_id,s\_fname

from staff

where s\_doj>'01-jan-2019';



**11)Retrieve name of lab technician who diagnosed 'Nola Bell"**

SELECT s\_fname, s\_lname

FROM staff s, jobtype jd

WHERE s.j\_id=jd.j\_id and jd.j\_name = 'Lab technician' and s\_id IN (SELECT s\_id

FROM patient p, prescription pp

WHERE p.p\_id = pp.p\_id and p\_fname= 'Nola' and p\_lname= 'Bell');



**12)Retrieve patient's name who have been insured by LIC health insurance cover**

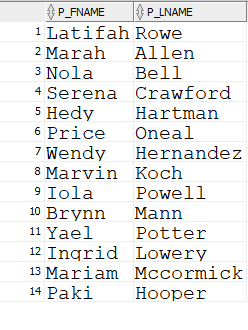
SELECT p.p\_fname, p.p\_lname

from patient p

where p.i\_id IN (select i.i\_id

from insurance i

where i.i\_name='LIC');



**13)Find the patient id and name and insurance type of the patient with the highest insurance amount.**

select p.p\_id,p.p\_fname, i1.i\_name, i1.i\_amount

from insurance i1 ,patient p

where i1.i\_id=p.i\_id and NOT EXISTS(select \* from insurance i2

where i2.i\_amount > i1.i\_amount);



**14] display the amount charged by staff named Noble to the patient**

SELECT amount

FROM patient\_record pa,room r

WHERE pa.R\_NO=r.R\_NO

and r.s\_id in(select r.s\_id

from staff s, Room r

where r.s\_id=s.s\_id AND s.S\_Fname like '%Noble%');



**15) display staff name who prescibes the medicine 'Carvedilol'**

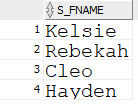
select s.s\_fname

from staff s

where s.s\_id IN (select p.s\_id

from prescription p

where p.med\_name='Carvedilol');



**16)display the shift of the staff who treats patients of age 20**

Select SHIFT

from staff s , prescription pr

where s.s\_id=pr.s\_id

and pr.P\_ID in(select pr.P\_ID

from prescription pr, patient p

where pr.P\_ID=p.P\_ID and p.P\_AGE=20);



**17)display patient name who has been prescibed the medicine 'Diovan HCT'**

select p1.p\_fname

from patient p1

where p1.p\_id IN (select p.p\_id

from prescription p

where p.med\_name='Diovan HCT');



**18)display the insurance id of the patient who is treated by a staff with more than 4 years of experience**

Select i\_id

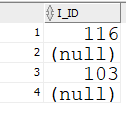
from patient p , prescription pr

where p.P\_ID=pr.P\_ID

and pr.P\_ID in(select pr.P\_ID

from staff s

where pr.s\_id=s.s\_id and s.S\_YOE<3);



**19)display staff name who handles room number 11**

select s.s\_fname

from staff s

where s.s\_id in(select r.s\_id

from room r

where r.r\_no=11);



**20)display the insurance id of the patient who is treated by the staff whose last name is Huber**

Select i\_id

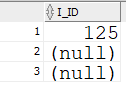
from patient p , prescription pr

where p.P\_ID=pr.P\_ID

and pr.P\_ID in(select pr.P\_ID

from prescription pr, staff s

where pr.s\_id=s.s\_id and s.S\_Lname like '%Huber%');



**21)display the test name given by the staff who has qualification in BMLT**

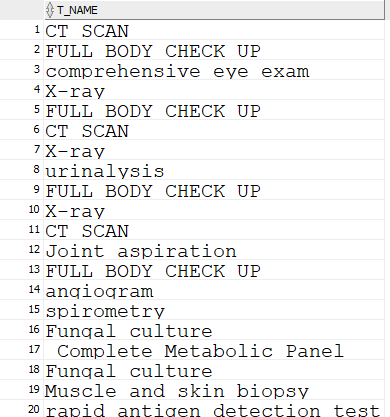
select t.t\_name

from test t, staff s

where s.s\_id =t.s\_id and s.j\_id IN(select j.j\_id

from jobtype j

where j.qualification LIKE '%BMLT%');



**22)display the years of experince and name of staff who charges amount 2200**

select S\_Fname,S\_YOE

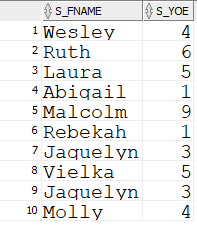
from staff s,room r

where s.s\_id=r.s\_id

and r.R\_NO in(select r.R\_NO

from room r, patient\_record pa

where r.R\_NO=pa.R\_NO and pa.amount= 2200);



**23)display the jobtype name of the staff who is assigned to room number 26**

select J\_name

from jobtype j, staff s

where s.j\_id=j.j\_id

and s.s\_id in(select s.s\_id

from room r, staff s

where r.s\_id=s.s\_id and r.R\_NO=26);



**24)display bed number and room number of the patients treated by 'Malcolm'**

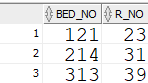
select pr.bed\_no, pr.r\_no

from patient\_record pr

where pr.r\_no IN (select r1.r\_no

from room r1, staff s

where s.s\_id=r1.s\_id and s.s\_fname= 'Malcolm');



**28)display the job type of the staff who had treated 'Price Oneal'**

select j.j\_name

from jobtype j, staff s

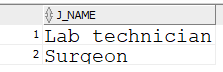
where s.j\_id=j.j\_id and s.s\_id in(select pr.s\_id

from prescription pr

where pr.p\_id IN(select p.p\_id

from patient p

where p.p\_fname='Price' and p.p\_lname='Oneal'));

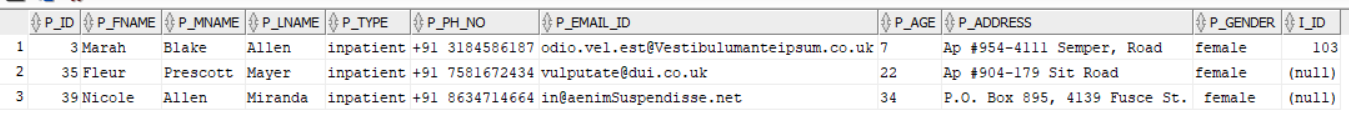


**29)display details of patient who are females and are inpatients.**

select \* from patient p1

where exists ( select \* from patient p2

where p2.P\_Type like '%inpatient%' and p2.P\_GENDER like '%female%' and p1.P\_GENDER=p2.P\_GENDER and p1.P\_Type=p2.P\_Type );



**3. Different Clauses & Functions**

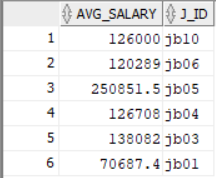
**1] Display the average salary of all doctors**

select AVG(s.S\_Salary) avg\_salary,j.J\_id

from staff s, jobtype j

where j.J\_id=s.J\_id and (j.J\_name<>'Nurse') and (j.J\_name<>'Ward boy') and (j.J\_name<>'Lab technician') and (j.J\_name<>'Radiologist') and (j.J\_name<>'Receptionist')

GROUP BY j.J\_id;



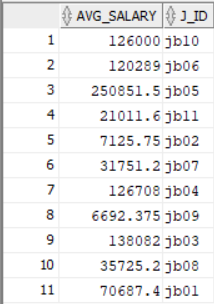
**2] Display the average salary of all staff members**

select AVG(s.S\_Salary) avg\_salary,jb.J\_id

from staff s, jobtype jb

where jb.J\_id=s.J\_id

GROUP BY jb.J\_id;



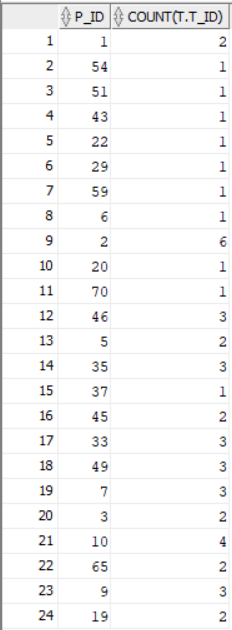
**3] Display total number of tests each patient was prescribed**

select p.P\_ID, COUNT(t.T\_id)

from Patient p, prescription pr, test t

where pr.P\_ID = p.P\_ID and pr.PR\_ID=t.PR\_ID

GROUP BY p.P\_ID;



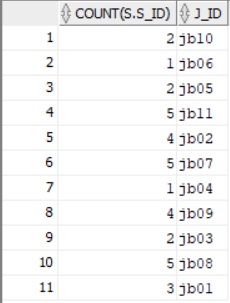
**4] Display number of staff members working for day shift based on their job type**

select COUNT(s.S\_id),s.J\_id

from jobtype j, staff s

where s.J\_id=j.J\_id and s.SHIFT='Day'

GROUP BY s.J\_id;



**5] Display for each doctor total number of patients consulted and total insurance amt paid by those patients**

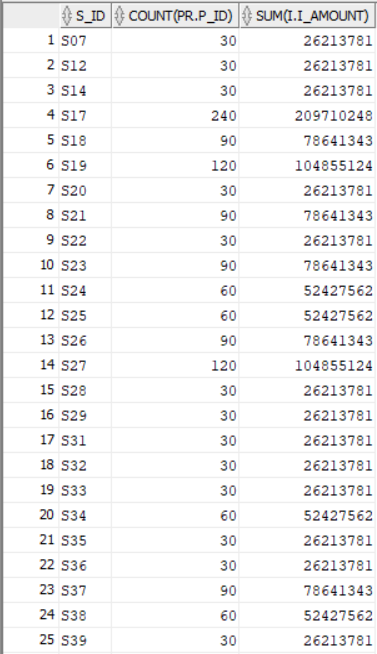
select s.S\_id , COUNT(pr.P\_id) , SUM(i.i\_amount)

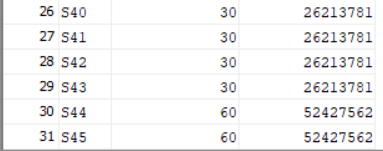
from insurance i, patient p, prescription pr, staff s

where pr.p\_id=p.P\_id and pr.S\_id=s.S\_id

GROUP BY s.S\_id

ORDER BY s.S\_id;





**6] Display the doctors names who have prescribed the patients more than 2 tests**

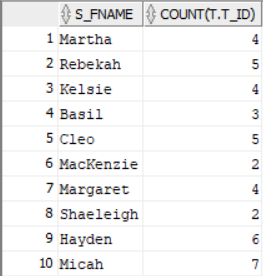
select s.s\_fname , COUNT(t.t\_id)

from staff s,test t, prescription pr

where s.s\_id=pr.s\_id and pr.p\_id=t.pr\_id

GROUP BY s.s\_fname

HAVING COUNT (t.t\_id)>=2;



**7] Display Count of how many times each insurance is used by different patients**

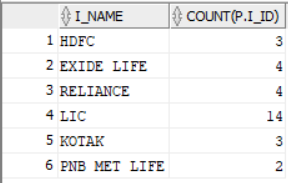
select i.i\_name, COUNT(p.i\_id)

from patient p, insurance i

where p.i\_id=i.i\_id

GROUP BY i.i\_name

HAVING count(p.i\_id)>1;

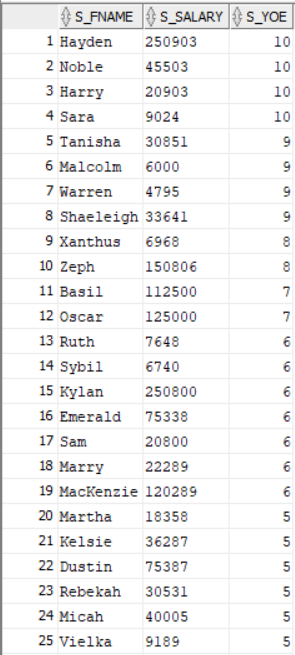


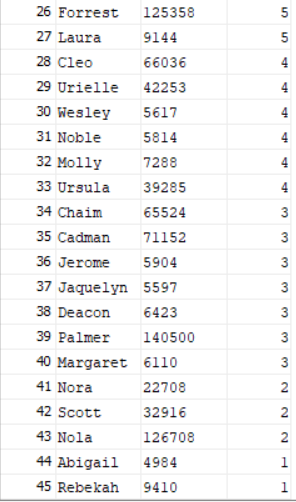
**8] Display names and salary of the staff from highest to lowest years of experience**

select s.s\_fname,s.s\_salary,s.s\_yoe

from staff s

ORDER BY s.s\_yoe DESC;





**9] Retrieve the name of the Gynaecologist who has 2 patients.**

select s.s\_fname , COUNT(pr.p\_id)

from staff s,jobtype j, prescription pr

where s.j\_id=j.j\_id and j.j\_name like '%Gynaecologist%' and s.s\_id=pr.s\_id

GROUP BY s.s\_fname

HAVING COUNT (pr.p\_id)>1;



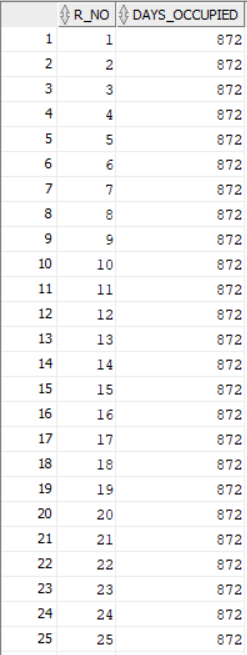
**10] Display number of days each ward was occupied chronologically**

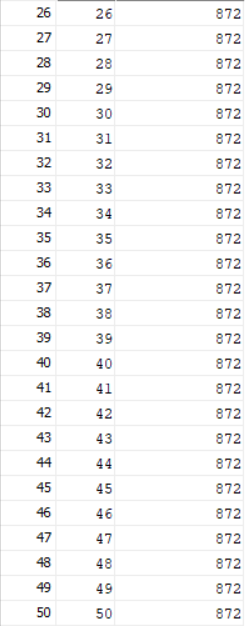
select distinct r.r\_no, SUM(pr.discharge\_date - pr.admit\_date)days\_occupied

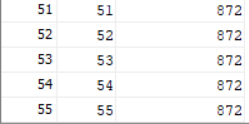
from patient\_record pr, room r

GROUP BY r.r\_no

ORDER BY r.r\_no;







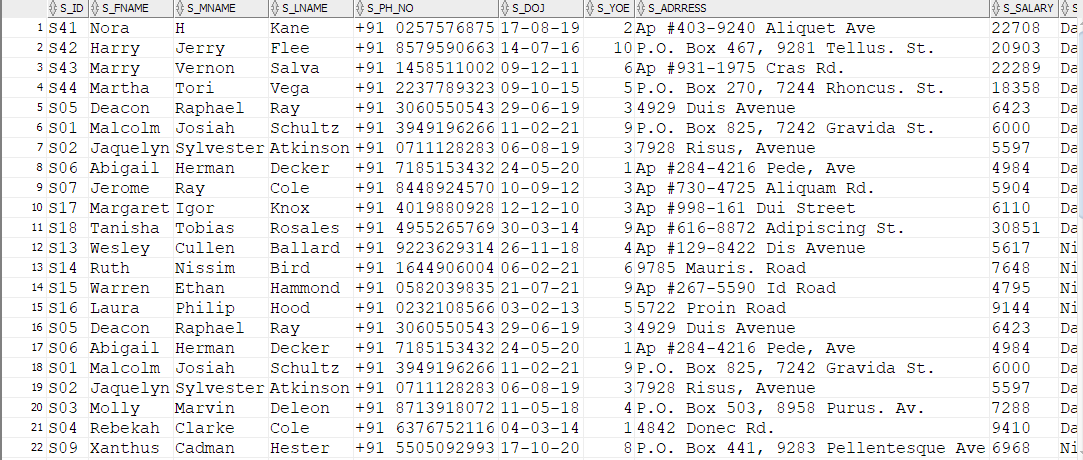
**4. MULTIPLE JOINS**

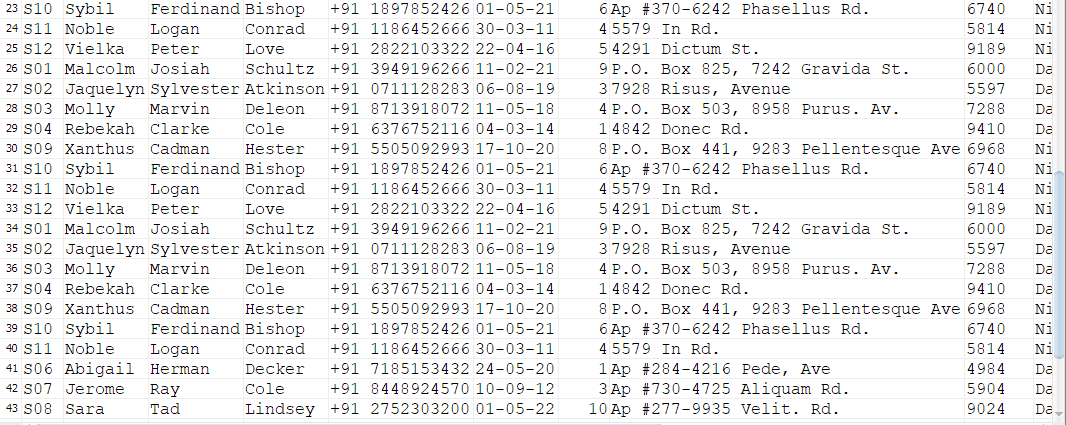
**1.Retrieve staff details of the nurse/ward boy assigned to the room**

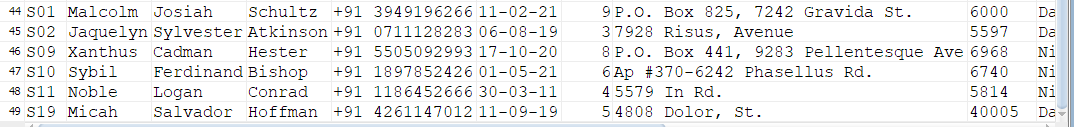
SELECT \*

FROM staff

NATURAL JOIN room;





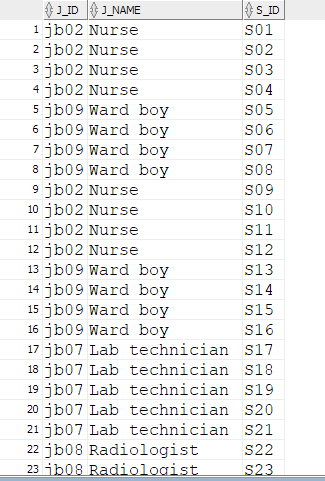


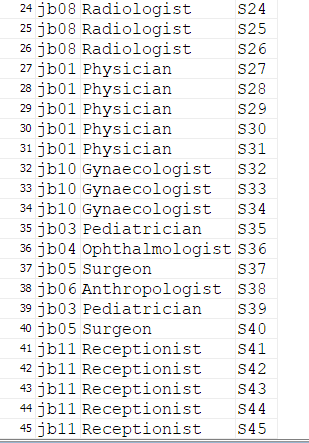
**2. Display the jobtype of all the staff members**

SELECT jobtype.j\_id,jobtype.j\_name, staff.s\_id

FROM jobtype

INNER JOIN staff ON jobtype.j\_id=staff.j\_id;





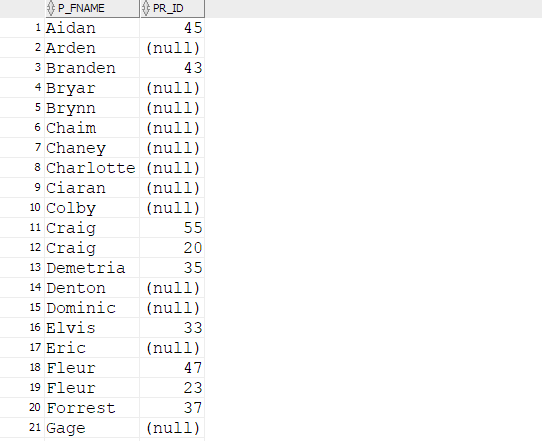
**3. Display patient name who has been prescribed the prescription.**

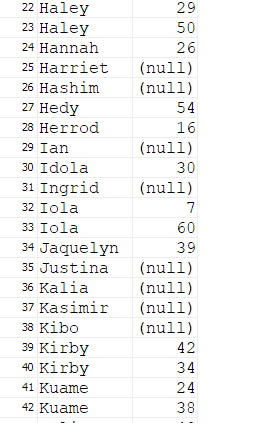
SELECT patient.p\_fname, prescription.pr\_id

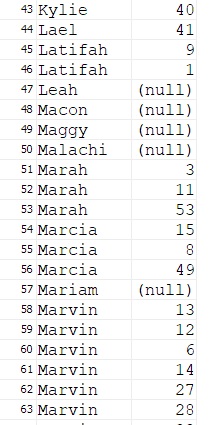
FROM patient

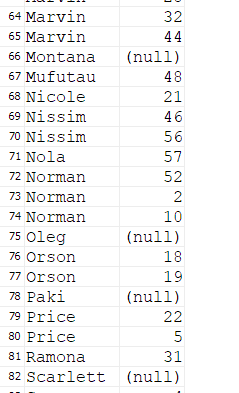
LEFT JOIN prescription ON patient.p\_id = prescription.p\_id

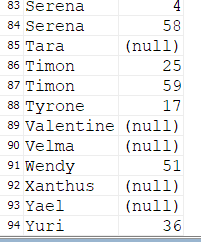
ORDER BY patient.p\_fname;











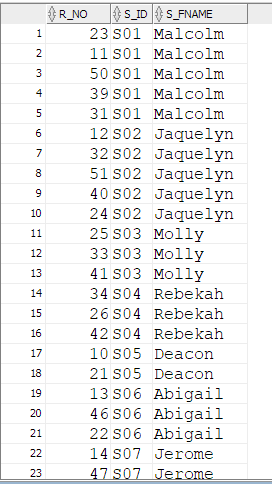
**4.Retrieve staff id and staff name assigned to the rooms.**

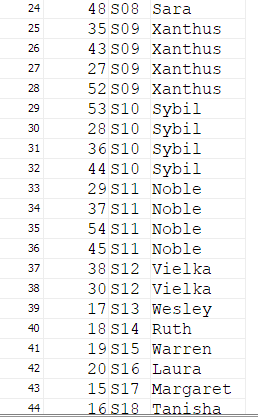
SELECT room.r\_no, staff.s\_id, staff.s\_fname

FROM room

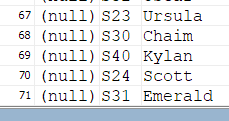
RIGHT JOIN staff ON room.s\_id=staff.s\_id

ORDER BY room.s\_id;









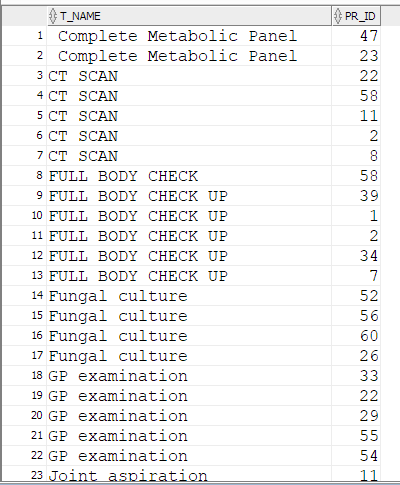
**5. Retrieve the test name prescribed to the patients**

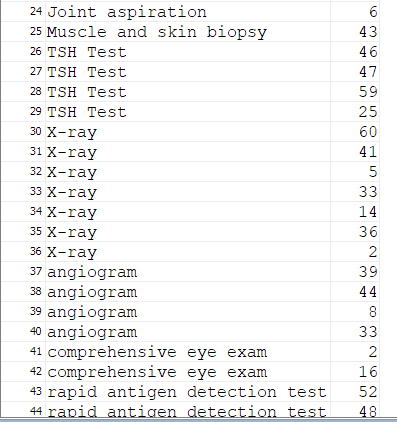
SELECT test.t\_name, prescription.pr\_id

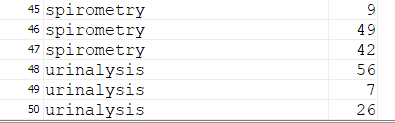
FROM test

INNER JOIN prescription ON test.pr\_id = prescription.pr\_id

ORDER BY test.t\_name;







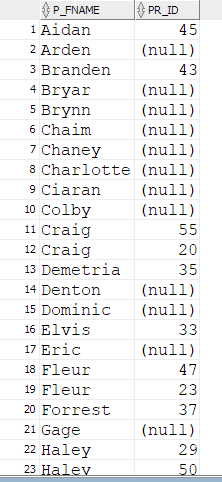
**6.Retrieve patient names of each prescription id.**

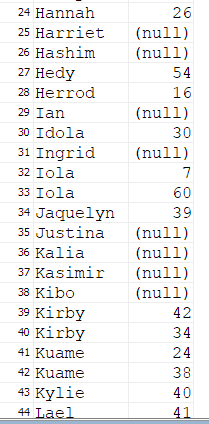
SELECT patient.p\_fname, prescription.pr\_id

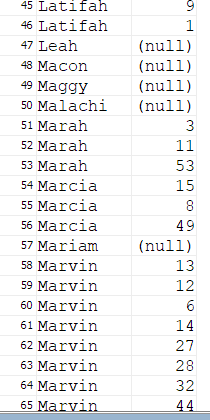
FROM patient

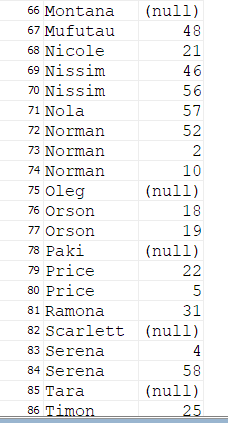
FULL OUTER JOIN prescription ON patient.p\_id=prescription.p\_id

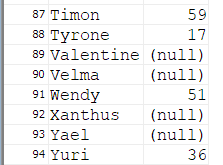
ORDER BY patient.p\_fname;











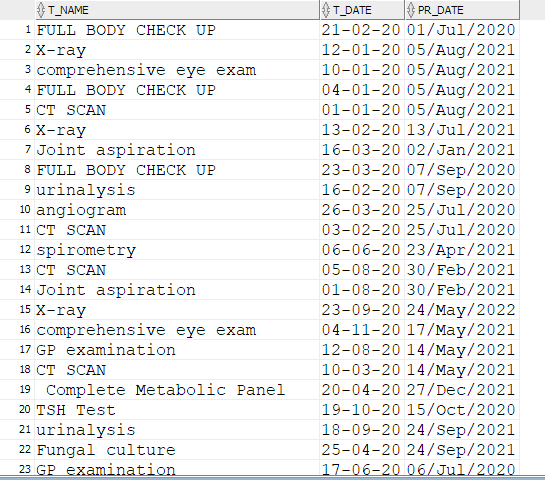
**7.Display all the test name , test date and their respective prescription date**

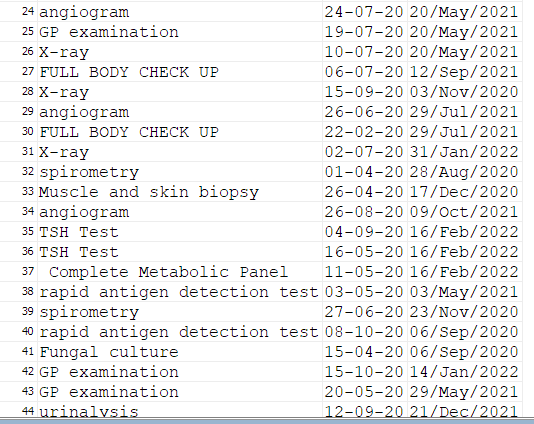
SELECT test.t\_name, test.t\_date,prescription.pr\_date

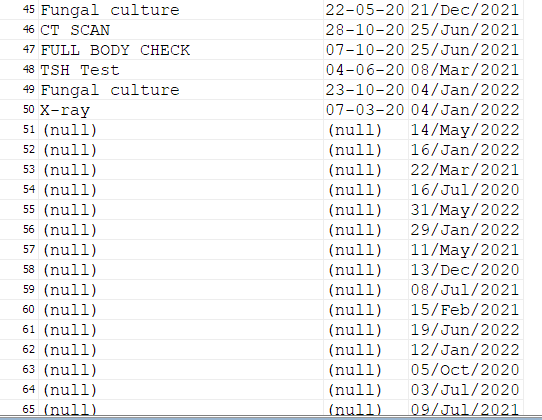
FROM test

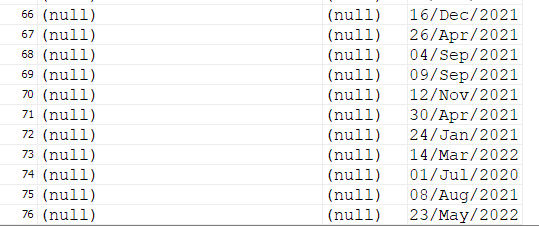
FULL JOIN prescription

ON test.pr\_id=prescription.pr\_id;









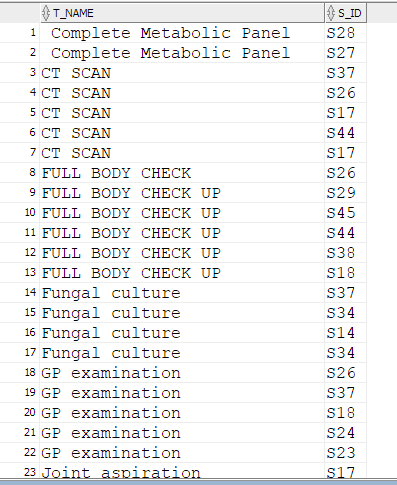
**8.Display the staff id who prescribed the test**

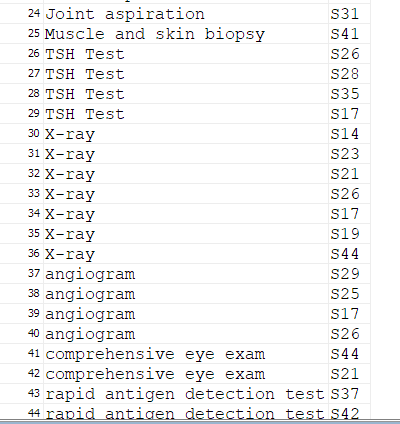
SELECT test.t\_name, prescription.s\_id

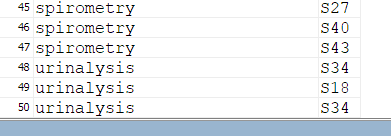
FROM test

INNER JOIN prescription ON test.pr\_id = prescription.pr\_id

ORDER BY test.t\_name;







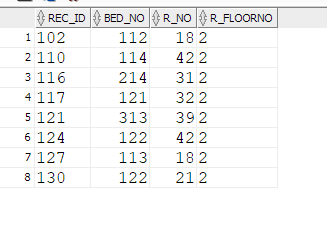
**9.Display the record id ,bed number and floor number whose room number is 2**

SELECT rec\_id,bed\_no,r\_no,r\_floorno

FROM patient\_record

NATURAL JOIN room

WHERE r\_floorno=2;



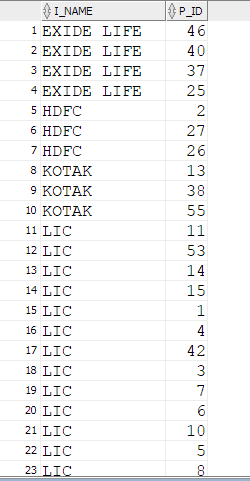
**10.Retrieve the insurance company name of the patients**

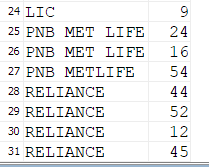
SELECT insurance.i\_name, patient.p\_id

FROM insurance

INNER JOIN patient ON insurance.i\_id = patient.p\_id

ORDER BY insurance.i\_name;





**5. ARITHMETIC AND LOGIC OPERATIONS**

**1] Display patient information who has undergone test FULL BODY CHECK UP in month of january**

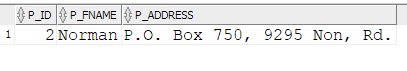
select p.p\_id, p.p\_fname, p.p\_address

from patient p, prescription pr, test t

where p.p\_id=pr.p\_id AND pr.pr\_id=t.pr\_id

AND t.t\_name like '%FULL BODY CHECK UP%'

AND t.t\_date like '%-01-%';



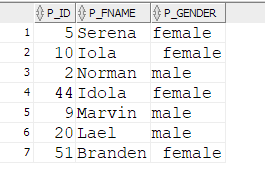
**2]Display patient details who are diagnosed with Pain in joints**

select p.p\_id , p.p\_fname , p.p\_gender

from patient p , prescription pr

where p.p\_id=pr.p\_id

AND pr.diagnosis like '%Pain in joint%';



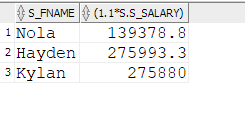
**3] Display Ophthalmologist and Surgeon name and salary by giving 10% bonus**

select s.s\_fname, (1.1\*s.s\_salary)

from staff s, jobtype j

where s.j\_id=j.j\_id

AND (j.j\_name like '%Ophthalmologist%' OR j.j\_name like '%Surgeon%');

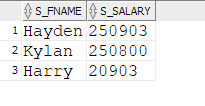


**4]Display name and salary of staff members name starting with H and salary>200000**

select s.s\_fname, s.s\_salary from staff s where

s.s\_fname like '%H%'

OR s.s\_salary>200000;



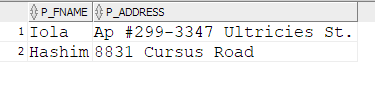
**5] Display the patient details who got admitted in room number 23,24 and 25**

select p.p\_fname, p.p\_address

from patient p, patient\_record pr

where p.p\_id=pr.p\_id

AND pr.r\_no IN (23,24,25);



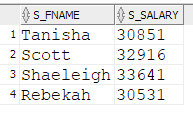
**6] Display staff information whose salary ranges between 30k - 35k**

select s.s\_fname,s.s\_salary

from staff s

where s.s\_salary

BETWEEN 30000 AND 35000;



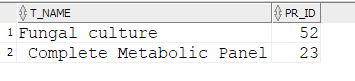
**7] Display test name prescription id whose will get their test results between 16 april 2020 and 25 april 2020**

select t.t\_name, t.pr\_id

from test t

where t.tr\_date

BETWEEN '16-04-2020' AND '25-04-2020';



**8] Display names of staff members who either is assigned to room or does tests.**

select s.s\_fname

from staff s, room r

where s.s\_id=r.s\_id

UNION

select s.s\_fname

from staff s, test t

where s.s\_id=t.s\_id;



9] Display name of female patients who have insuarance amount>100000

select p.p\_fname

from patient p

where p.p\_gender='female'

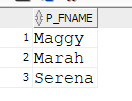
INTERSECT

select p.p\_fname

from patient p, insurance i

where i.i\_amount>100000

and i.i\_id=p.i\_id;



**10] Display Doctors name who diagnosis the patient with visual error and have experience more than 5 years**

select s.s\_fname

from staff s, prescription pr

where s.s\_id=pr.s\_id

AND pr.diagnosis=' Visual refractive errors'

INTERSECT

select s.s\_fname

from staff s, jobtype j

where s.j\_id=j.j\_id

AND s.s\_yoe>5;

