**PROJECT**

**SQL If-else**

**Database schema:**

Diagram, schematic

Description automatically generated

**Problem Statement 1:**

Insurance companies want to know if a disease is claimed higher or lower than average. Write a stored procedure that returns “claimed higher than average” or “claimed lower than average” when the diseaseID is passed to it.

Hint: Find average number of insurance claims for all the diseases. If the number of claims for the passed disease is higher than the average return “claimed higher than average” otherwise “claimed lower than average”.

DELIMITER $$

CREATE PROCEDURE IF NOT EXISTS check\_claim(IN id INT, OUT result VARCHAR(50))

BEGIN

DECLARE avg\_claim\_count INT;

DECLARE claim\_count INT DEFAULT 0;

CREATE VIEW disease\_claim\_count AS

SELECT t.diseaseid, COUNT(t.claimid) AS 'claim count', COUNT(t.treatmentid) AS 'treatment count'

FROM treatment t

GROUP BY t.diseaseid;

IF id IN (SELECT diseaseid FROM disease\_claim\_count) THEN

SET claim\_count = (SELECT `claim count`

FROM disease\_claim\_count

WHERE diseaseid=id);

END IF;

SET avg\_claim\_count = (SELECT FLOOR(AVG(`claim count`))

FROM disease\_claim\_count);

IF claim\_count < avg\_claim\_count THEN

SET result = 'claimed lower than average';

ELSEIF claim\_count > avg\_claim\_count THEN

SET result = 'claimed higher than average';

ELSE

SET result = 'claimed equal to average';

END IF;

DROP VIEW disease\_claim\_count;

END $$

DELIMITER ;

**Problem Statement 2:**

Joseph from Healthcare department has requested for an application which helps him get genderwise report for any disease.

Write a stored procedure when passed a disease\_id returns 4 columns,  
**disease\_name, number\_of\_male\_treated, number\_of\_female\_treated, more\_treated\_gender**

Where, **more\_treated\_gender** is either ‘male’ or ‘female’ based on which gender underwent more often for the disease, if the number is same for both the genders, the value should be ‘same’.

DELIMITER $$

CREATE PROCEDURE IF NOT EXISTS gender\_analysis(IN id INT)

BEGIN

DECLARE name VARCHAR(100);

DECLARE no\_of\_male\_treated INT;

DECLARE no\_of\_female\_treated INT;

DECLARE more\_treated\_gender CHAR(6);

SET name = (SELECT diseasename

FROM disease

WHERE diseaseid=id);

SELECT COUNT(IF(psn.gender='male',1,NULL)),

COUNT(IF(psn.gender='female',1,NULL))

INTO no\_of\_male\_treated, no\_of\_female\_treated

FROM treatment t

INNER JOIN patient pnt USING(patientid)

INNER JOIN person psn ON pnt.patientid = psn.personid

WHERE t.diseaseid = id;

IF no\_of\_male\_treated > no\_of\_female\_treated THEN

SET more\_treated\_gender = 'male';

ELSEIF no\_of\_male\_treated < no\_of\_female\_treated THEN

SET more\_treated\_gender = 'female';

ELSE

SET more\_treated\_gender = 'same';

END IF;

SELECT name AS diseasename, no\_of\_male\_treated, no\_of\_female\_treated, more\_treated\_gender;

END $$

DELIMITER ;

**Problem Statement 3:**

The insurance companies want a report on the claims of different insurance plans.

Write a query that finds the top 3 most and top 3 least claimed insurance plans.

The query is expected to return the insurance plan name, the insurance company name which has that plan, and whether the plan is the most claimed or least claimed.

WITH tmt\_cnt AS

(SELECT ic.companyname, ip.planname, COUNT(t.treatmentid) AS treatment\_count

FROM treatment t

INNER JOIN claim c USING(claimid)

INNER JOIN insuranceplan ip USING(uin)

INNER JOIN insurancecompany ic USING(companyid)

GROUP BY ic.companyname, ip.planname),

most\_claimed AS

(SELECT companyname,planname, 'most claimed' AS 'claim'

FROM tmt\_cnt

ORDER BY treatment\_count DESC

LIMIT 3),

least\_claimed AS

(SELECT companyname,planname, 'least claimed' AS 'claim'

FROM tmt\_cnt

ORDER BY treatment\_count

LIMIT 3)

SELECT \*

FROM most\_claimed

UNION ALL

SELECT \*

FROM least\_claimed;

**Problem Statement 4:**

The healthcare department wants to know which category of patients is being affected the most by each disease.

Assist the department in creating a report regarding this.

Provided the healthcare department has categorized the patients into the following category.

*YoungMale: Born on or after 1st Jan 2005 and gender male.*

*YoungFemale: Born on or after 1st Jan 2005 and gender female.*

*AdultMale: Born before 1st Jan 2005 but on or after 1st Jan 1985 and gender male.*

*AdultFemale: Born before 1st Jan 2005 but on or after 1st Jan 1985 and gender female.*

*MidAgeMale: Born before 1st Jan 1985 but on or after 1st Jan 1970 and gender male.*

*MidAgeFemale: Born before 1st Jan 1985 but on or after 1st Jan 1970 and gender female.*

*ElderMale: Born before 1st Jan 1970, and gender male.*

*ElderFemale: Born before 1st Jan 1970, and gender female.*

WITH categorized\_patient AS

(SELECT pnt.patientid, psn.personname, psn.gender, pnt.dob,

(CASE

WHEN pnt.dob >= '2005-01-01' AND psn.gender = 'male' THEN 'YoungMale'

WHEN pnt.dob >= '2005-01-01' AND psn.gender = 'female' THEN 'YoungFemale'

WHEN (pnt.dob >= '1985-01-01' AND pnt.dob < '2005-01-01') AND psn.gender = 'male' THEN 'AdultMale'

WHEN (pnt.dob >= '1985-01-01' AND pnt.dob < '2005-01-01') AND psn.gender = 'female' THEN 'AdultFemale'

WHEN (pnt.dob >= '1970-01-01' AND pnt.dob < '1985-01-01') AND psn.gender = 'male' THEN 'MidAgeMale'

WHEN (pnt.dob >= '1970-01-01' AND pnt.dob < '1985-01-01') AND psn.gender = 'female' THEN 'MidAgeFemale'

WHEN (pnt.dob < '1970-01-01') AND psn.gender = 'male' THEN 'ElderMale'

WHEN (pnt.dob < '1970-01-01') AND psn.gender = 'female' THEN 'ElderFemale'

END

) AS category

FROM patient pnt

INNER JOIN person psn ON pnt.patientid = psn.personid

),

tmt\_cnt AS

(SELECT d.diseasename, c\_pnt.category, COUNT(t.treatmentid) AS treatment\_count

FROM treatment t

INNER JOIN categorized\_patient c\_pnt USING(patientid)

INNER JOIN disease d USING(diseaseid)

GROUP BY d.diseasename, c\_pnt.category),

tmt\_cnt\_row\_num AS

(SELECT \*,

ROW\_NUMBER() OVER(PARTITION BY diseasename ORDER BY treatment\_count DESC) AS row\_num

FROM tmt\_cnt

)

SELECT diseasename, category, treatment\_count

FROM tmt\_cnt\_row\_num

WHERE row\_num = 1;

**Problem Statement 5:**

Anna wants a report on the pricing of the medicine. She wants a list of the most expensive and most affordable medicines only.

Assist anna by creating a report of all the medicines which are pricey and affordable, listing the companyName, productName, description, maxPrice, and the price category of each. Sort the list in descending order of the maxPrice.

Note: A medicine is considered to be “**pricey**” if the max price exceeds 1000 and “**affordable**” if the price is under 5. Write a query to find

WITH categorized\_medicine AS

(SELECT companyname, productname,description,maxprice,

(CASE

WHEN maxprice > 1000 THEN 'pricey'

WHEN maxprice < 5 THEN 'affordable'

END) AS category

FROM medicine)

SELECT \*

FROM categorized\_medicine

WHERE category IS NOT NULL

ORDER BY maxprice DESC;