CODING INVADOR SQL CODE FROM METABASE

select \* from vaccinations

Which country has exactly 19 countries ahead of it in terms of total vaccinations?

Instructions:

1. Perform a self join with the condition that one table’s total vaccinations are less than other tables total vaccinations (on a.total\_vaccinations less than b.total\_vaccinations)

2. Select country from table with lesser vaccinations and count the number of countries from other table

3. Use group by statement on country

4. Use having statement to filter the count of countries is equal to 19

SELECT a.country, count(b.country) as no\_country\_vac

FROM vaccinations a

INNER JOIN

vaccinations b

ON a.total\_vaccinations < b.total\_vaccinations

group by a.country

having no\_country\_vac = 19

What is the difference in percentages of

1. % of People vaccinated in India out of total people vaccinated in Asia

2. % of people vaccinated in France out of total people vaccinated in Europe

Instructions:

1. Perform a self join between vaccinations and subquery of vaccinations where total people vaccinated are computed by continent

2. Join the two tables on column continent

3. Now calculate percentage by dividing people vaccinated for each country and total people vaccinated in their respective continent

4. Filter the data for India and France

5. Difference between two percentages is the answer

SELECT A.Country, people\_vaccinated \* 100/

(SELECT SUM(people\_vaccinated)

FROM vaccinations

WHERE Continent = 'Asia') AS perc\_of\_People\_vacc\_India\_Asia

FROM vaccinations A

INNER JOIN

(SELECT Country, people\_vaccinated \* 100/

(SELECT SUM(people\_vaccinated)

FROM vaccinations

WHERE Continent = 'Europe') AS perc\_of\_People\_vacc\_France\_Europe

FROM vaccinations

WHERE Country = 'France') B

ON A.Continent = B.Continent

WHERE A.Country = 'India'

/\* Course Project 3 - SQL SQL Project 1 Task Task \*/

/\* Question 1

1 point possible (graded)

Story: When we begin the exploratory data analysis, the first thing we do is go through all of

the related tables. To start With, we will check how many different types of loans are given by the CI capital.

What are the different types of loans given by CI Capital?

Question: How many distinct loan types are given by CI Capital?

Hint (1 of 1): Use Distinct\*/

SELECT \* FROM CI\_customer;

SELECT \* FROM CI\_economics;

SELECT \* FROM CI\_loan;

SELECT COUNT(\*)

FROM (SELECT DISTINCT loan\_type

FROM CI\_loan) B;

/\* Question 2

1 point possible (graded)

Story: Companies should know the distribution of the different loans to find out the gaps so that they can target more where the loan has

been given less than the actual target.

Find out the number of loans for each loan type.

Question: How many Auto loans for two-wheelers have been given?

Hint (1 of 1): Count(), groupby\*/

SELECT \* FROM CI\_loan;

SELECT COUNT(\*)

FROM( SELECT account\_no, loan\_type, total\_loans

FROM CI\_loan) B;

SELECT \* FROM CI\_customer;

SELECT education\_level FROM CI\_customer WHERE education\_level ="two-wheelers";

SELECT \* FROM CI\_economics;

SELECT loan\_type FROM CI\_loan WHERE loan\_type = "Auto";

/\* TIPS\_2 select the loantype and perform count on Number of loans

group by loan types\*/

/\* EXPECTED\*/

SELECT \* FROM CI\_loan;

SELECT COUNT(\*)

FROM(SELECT loan\_type, COUNT(loan\_type)

FROM CI\_loan

GROUP BY loan\_type) B;

/\* Question 3

1 point possible (graded)

Story: Age is a very important variable while giving out the loan. A younger applicant is considered to have more employment and earning

opportunities against an older applicant. Therefore, if you are in your 20's,

you are more eligible to get a personal loan of a longer tenure as compared to someone who is in the 50s.

Let’s check the distribution of loans by age.

Find out the customers who are less than 30 years old and have taken loans?

Question: What is the age of account\_no CI11?\*/

SELECT \* FROM CI\_customer;

SELECT \*

FROM CI\_customer

WHERE age < 30 AND account\_no = "CI11";

/\* Question 4

1 point possible (graded)

Story: A credit score is a number between 300–850 that depicts a consumer's creditworthiness. The higher the score, the better a

borrower looks to potential lenders. A credit score is based on credit history: number of open accounts, total levels of debt, and repayment history, and other factors.

Let’s check the loan type which is in more risk due to low credit score?

How many loans have been given where credit score is less than 580 by different loan types?

Question: What is the minimum credit score for the Housing Loan?\*/

SELECT \* FROM CI\_loan;

SELECT loan\_type, COUNT(loan\_type)

FROM CI\_loan

WHERE credit\_score < 580

GROUP BY loan\_type;

/\* Question 5

1 point possible (graded)

Story: Even when a customer's credit score is high,Borrower can fall behind on loan repayments. We will investigate whether income plays a role in this phase.

Find out the average income of customers who have credit scores more than 700 and have been defaulted?

Question: What is the average annual income of the customers who have defaulted?\*/

SELECT \* FROM CI\_customer;

SELECT \* FROM CI\_loan;

/\*EXPECTED\*/

SELECT b.if\_default,

Avg(annual\_income) AS Average\_annual\_income

FROM CI\_customer a

INNER JOIN CI\_loan b

ON a.account\_no = b.account\_no

WHERE b.credit\_score > 700

GROUP BY b.if\_default;

/\* Question 6

1 point possible (graded)

Story: When conducting exploratory research, it is important to consider the relationship between variables in order to gain insights into how one variable follows the flow of another variable.

What is the average credit score by different marital status?

Question: What is the average credit score for widower?\*/

SELECT \* FROM CI\_loan;

SELECT \* FROM CI\_customer;

SELECT \* FROM CI\_economics;

SELECT marital\_status, AVG(credit\_score) AS avg\_credit\_score\_widower

FROM CI\_loan A

INNER JOIN CI\_customer B

ON A.account\_no = B.account\_no

GROUP BY marital\_status;

/\* Question 7

1 point possible (graded)

Story: Is education level important while giving out the loan? Let’s check the relation between the education level and loan defaulters?

How many customers have more than or equal to 5 defaults by different education levels?

Question: How many customers who are doing Masters education have been defaulted?\*/

SELECT \* FROM CI\_loan;

SELECT \* FROM CI\_customer;

SELECT \* FROM CI\_economics;

/\* EXPECTED\*/

SELECT a.education\_level,

Sum(b.if\_default) as default\_count

FROM CI\_customer a

INNER JOIN CI\_loan b

ON a.account\_no = b.account\_no

WHERE a.education\_level = "MASTERS"

GROUP BY a.education\_level

HAVING default\_count >= 5

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/\* WEBINAR\*/

SELECT \* FROM CI\_customer;

SELECT account\_no, AVG(annual\_income) as average\_annual\_income

FROM CI\_customer

WHERE credit\_score > 700;

SELECT \* FROM churn\_data;

SELECT AVG(MonthlyCharges)

FROM churn\_data

WHERE Churn = "NO";

SELECT ROUND(AVG(MonthlyCharges), 2) AS AVERAGE\_ROUND

FROM churn\_data

WHERE Churn = "YES";

SELECT Churn, COUNT(Churn)

FROM churn\_data

GROUP BY churn;

SELECT \* FROM customer\_data;

SELECT GENDER, count(gender) AS MALE\_FEMALE

FROM customer\_data

GROUP BY gender;

SELECT \* FROM customer\_data;

SELECT COUNT()

SELECT \* FROM churn\_data;

SELECT \*

FROM churn\_data

ORDER BY MonthlyCharges DESC;

SELECT \*

FROM churn\_data

ORDER BY MonthlyCharges DESC, tenure DESC;

SELECT \* FROM churn\_data;

SELECT \*

FROM churn\_data

WHERE churn = "NO" AND MonthlyCharges >100;

SELECT \*

FROM churn\_data

WHERE churn = "NO" AND MonthlyCharges between 100 AND 150;

SELECT \*

FROM churn\_data

ORDER BY MonthlyCharges limit 3

SELECT \* FROM churn\_data

SELECT DISTINCT PaymentMethod

FROM churn\_data

SELECT COUNT(\*)

FROM(

SELECT \*

FROM churn\_data

WHERE tenure between 50 AND 70 AND churn = "NO") B;

/\* Question 8

1 point possible (graded)

Story: External factors such as the country's GDP and unemployment rate affects the loan demand. As a result, we must recognize this when developing new policies and rules for the business.

Create a report that shows the relationship between the number of loans granted for each month and respective unemployment rate. It should be sorted by unemployment rate, from lowest to highest.

Note: The CI\_economics table has data from 2018 to 2020.

Report Should contain the following Columns in the same exact sequence:

Report\_Month,

Real\_GDP\_in\_Lakh\_Crore,

unemp\_rate,

Count of Loans

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Question: What is the unemployment rate of the country in Feb 2019?

\*/

SELECT

a.report\_month,

a.real\_gdp\_in\_lakh\_crore,

a.unemp\_rate,

Count(b.account\_no) AS count\_of\_loans

FROM

CI\_economics a

LEFT JOIN CI\_loan b

ON Year(a.report\_month) = Year(b.start\_date)

AND Month(a.report\_month) = Month(b.start\_date)

GROUP

BY a.report\_month,

a.real\_gdp\_in\_lakh\_crore,

a.unemp\_rate

ORDER

BY a.report\_month ASC;

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/\*Course SQL Module 5 Part 3. HANDLING NULL VALUES IFNULL() and COALESCE()\*/

/\*Assignment 1

1 point possible (graded)

Assign value of total\_vaccinations to the field people\_vaccinated where the value is NULL. What is the total people\_vaccinated including all countries? (Use IFNULL)

Hint (1 of 1): Instructions:

1. Use IFNULL function in the sum function to select people\_vaccinated

2. If the people\_vaccinated is NULL, then give total\_vaccinations\*/

SELECT \* FROM vaccinations;

SELECT

SUM(IFNULL(people\_vaccinated, total\_vaccinations)) AS Assign\_total\_vaccinations\_people\_vaccinated

FROM vaccinations ;

/\* Assignment 2

1 point possible (graded)

Assign 20% of total\_vaccinations to the field people\_vaccinated where the value is NULL. What is the total people\_vaccinated including

all countries? (Use Coalesce() )\*/

SELECT \* FROM vaccinations;

SELECT

SUM(coalesce(people\_vaccinated,0.2\*total\_vaccinations))

FROM vaccinations

/\* Course SQL Module 5 Part 6. Capstone project Unguided Exercise\*/

/\*Assignment 1

1/1 point (graded)

Create a report where all the movies are ranked based on revenue in their respective genre. What is the rank of ‘Inception’ movie in it’s genre?\*/

SELECT \* FROM imdb\_movies;

SELECT \*

FROM(SELECT \*,

RANK()

OVER(PARTITION BY GENRE ORDER BY Revenue\_Millions DESC) AS REPORT\_MOVIES\_REVENUE\_GENRE

FROM imdb\_movies) B

WHERE title = "Inception";

/\* Assignment 2

0/1 point (graded)

Create a report where all the movies are ranked based on rating in their respective genre. What is the rank of ‘Star Trek’ movies in it’s genre?

Note: In case of the same rating, movies with higher number of votes should be ranked higher.

Hint (1 of 1): Rank based on two fields rating and votes in descending order\*/

SELECT \*

FROM(SELECT \*,

RANK()

OVER(PARTITION BY GENRE ORDER BY RATING DESC, VOTES DESC) AS REPORT\_MOVIES\_REVENUE\_GENRE

FROM imdb\_movies) B

WHERE title = "Star Trek";

/\* EXPECTED\*/

SELECT \*

FROM (SELECT title,

genre,

rating,

votes,

Rank()

OVER (

partition BY genre

ORDER BY rating DESC, votes DESC) AS rank1

FROM imdb\_movies) A

WHERE title = 'Star Trek';

/\* Assignment 3

1 point possible (graded)

Compute the revenue contribution of movies towards the total revenue of respective genres. What is the revenue contribution of the ‘Gone Girl’ towards its genre?\*/

/\* Hint (1 of 1): Use Sum () over partition by to compute total revenue of genre\*/

SELECT \*

FROM (SELECT \*,

SUM(Revenue\_Millions)

OVER(PARTITION BY GENRE ORDER BY Revenue\_Millions DESC) AS REPORT\_MOVIES\_REVENUE\_GENRE

FROM imdb\_movies) B

WHERE title= "Gone Girl";

/\* Assignment 4

1 point possible (graded)

Compute the percentage rating in terms of top rated movies in their respective genre. For example, a

movie in ‘Action’ genre has maximum rating of 9, then percentage rating for all the movies in

‘Action’ genre would be (rating\*100/9). What is the percentage rating of the movie ‘Blood Diamond’?

Hint (1 of 1): Use MAX() over partition by to compute maximum rating of each genre\*/

SELECT \* FROM imdb\_movies;

SELECT TITLE, (RATING\*100/( SELECT \*,

MAX(RATING)

OVER(PARTITION BY GENRE ORDER BY RATING DESC) AS TOTAL\_TOP\_RATED\_MOVIE

FROM imdb\_movies)) AS PERC\_TOP\_RATED\_MOVIE

FROM imdb\_movies

WHERE TITLE = "Blood Diamond"

GROUP BY TITLE;