### Project 1: Corona Virus Analysis Q1. Write a code to check NULL values

SELECT

SUM(CASE WHEN Confirmed IS NULL THEN 1 ELSE 0 END) AS null\_confirmed,

SUM(CASE WHEN Deaths IS NULL THEN 1 ELSE 0 END) AS null\_deaths,

SUM(CASE WHEN Recovered IS NULL THEN 1 ELSE 0 END) AS null\_recovered

FROM covid\_data;

### Q2. If NULL values are present, update them with zeros for all columns

UPDATE covid\_data

SET

Confirmed = COALESCE(Confirmed, 0),

Deaths = COALESCE(Deaths, 0),

Recovered = COALESCE(Recovered, 0);

### Q3. Check total number of rows

SELECT COUNT(\*) AS total\_rows

FROM covid\_data;

### Q4. Check what is start\_date and end\_date

SELECT

MIN(Date) AS start\_date,

MAX(Date) AS end\_date

FROM covid\_data;

### Q5. Number of months present in the dataset

SELECT COUNT(DISTINCT DATE\_FORMAT(Date, '%Y-%m')) AS number\_of\_months

FROM covid\_data;

### Q6. Find monthly average for confirmed, deaths, recovered

SELECT

DATE\_FORMAT(Date, '%Y-%m') AS month,

AVG(Confirmed) AS avg\_confirmed,

AVG(Deaths) AS avg\_deaths,

AVG(Recovered) AS avg\_recovered

FROM covid\_data

GROUP BY month

ORDER BY month;

### Q7. Find the most frequent value for confirmed, deaths, recovered each month

SELECT

DATE\_FORMAT(Date, '%Y-%m') AS month,

Confirmed,

Deaths,

Recovered,

COUNT(\*) AS frequency

FROM covid\_data

GROUP BY month, Confirmed, Deaths, Recovered

ORDER BY month, frequency DESC;

### Q8. Find minimum values for confirmed, deaths, recovered per year

SELECT

YEAR(Date) AS year,

MIN(Confirmed) AS min\_confirmed,

MIN(Deaths) AS min\_deaths,

MIN(Recovered) AS min\_recovered

FROM covid\_data

GROUP BY year

ORDER BY year;

### Q9. Find maximum values of confirmed, deaths, recovered per year

SELECT

YEAR(Date) AS year,

MAX(Confirmed) AS max\_confirmed,

MAX(Deaths) AS max\_deaths,

MAX(Recovered) AS max\_recovered

FROM covid\_data

GROUP BY year

ORDER BY year;

### Q10. The total number of confirmed, deaths, recovered cases each month

SELECT

DATE\_FORMAT(Date, '%Y-%m') AS month,

SUM(Confirmed) AS total\_confirmed,

SUM(Deaths) AS total\_deaths,

SUM(Recovered) AS total\_recovered

FROM covid\_data

GROUP BY month

ORDER BY month;

### Q11. Check how coronavirus spread out with respect to confirmed case

SELECT

SUM(Confirmed) AS total\_confirmed,

AVG(Confirmed) AS avg\_confirmed,

VARIANCE(Confirmed) AS variance\_confirmed,

STDDEV(Confirmed) AS stddev\_confirmed

FROM covid\_data;

### Q12. Check how coronavirus spread out with respect to death cases per month

SELECT

DATE\_FORMAT(Date, '%Y-%m') AS month,

SUM(Deaths) AS total\_deaths,

AVG(Deaths) AS avg\_deaths,

VARIANCE(Deaths) AS variance\_deaths,

STDDEV(Deaths) AS stddev\_deaths

FROM covid\_data

GROUP BY month

ORDER BY month;

### Q13. Check how coronavirus spread out with respect to recovered case

SELECT

SUM(Recovered) AS total\_recovered,

AVG(Recovered) AS avg\_recovered,

VARIANCE(Recovered) AS variance\_recovered,

STDDEV(Recovered) AS stddev\_recovered

FROM covid\_data;

### Q14. Find the country having the highest number of confirmed cases

SELECT

`Country/Region` AS country,

SUM(Confirmed) AS total\_confirmed

FROM covid\_data

GROUP BY country

ORDER BY total\_confirmed DESC

LIMIT 1;

### Q15. Find the country having the lowest number of death cases

SELECT

`Country/Region` AS country,

SUM(Deaths) AS total\_deaths

FROM covid\_data

GROUP BY country

ORDER BY total\_deaths ASC

LIMIT 1;

### Q16. Find the top 5 countries having the highest recovered cases

SELECT

`Country/Region` AS country,

SUM(Recovered) AS total\_recovered

FROM covid\_data

GROUP BY country

ORDER BY total\_recovered DESC

LIMIT 5;