**Source Code:**

USE nish;

SELECT \* FROM nish.`corona virus dataset - copy`;

-- Q1

SELECT

count(\*) as total\_null\_values

FROM corona\_virus\_dataset

WHERE confirmed IS NULL

OR deaths IS NULL

OR recovered IS NULL;

-- Q2

alter table corona\_virus\_dataset

add column ID INT Auto\_increment PRIMARY KEY FIRST;

UPDATE corona\_virus\_dataset

SET province = COALESCE(province, 0),

longitude = COALESCE(longitude, 0),

confirmed = COALESCE(confirmed, 0),

confirmed = COALESCE(confirmed, 0),

confirmed = COALESCE(confirmed, 0),

deaths = COALESCE(deaths, 0),

recovered = COALESCE(recovered, 0)

where id > Null;

-- Q3

SELECT COUNT(\*) AS total\_rows

FROM corona\_virus\_dataset;

-- Q4

SELECT MIN(date) AS start\_date, MAX(date) AS end\_date

FROM corona\_virus\_dataset;

-- Q5

SELECT COUNT(DISTINCT DATE\_FORMAT(date, '%Y-%m')) AS total\_months

FROM corona\_virus\_dataset;

-- Q6

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

AVG(confirmed) AS avg\_confirmed,

AVG(deaths) AS avg\_deaths,

AVG(recovered) AS avg\_recovered

FROM corona\_virus\_dataset

GROUP BY month

Order BY month;

-- Q7

SELECT

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

COUNT(Confirmed) AS Frequency

FROM corona\_virus\_dataset

GROUP BY Month, Confirmed

ORDER BY Month, Frequency DESC;

SELECT

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

COUNT(Deaths) AS Frequency

FROM corona\_virus\_dataset

GROUP BY Month, Deaths

ORDER BY Month, Frequency DESC;

SELECT DATE\_FORMAT(Date, '%Y-%m') AS Month, Recovered,

COUNT(Recovered) AS Frequency

FROM corona\_virus\_dataset

GROUP BY Month, Recovered

ORDER BY Month, Frequency DESC;

-- Q8

SELECT YEAR(date) AS year,

MIN(confirmed) AS min\_confirmed,

MIN(deaths) AS min\_deaths,

MIN(recovered) AS min\_recovered

FROM corona\_virus\_dataset

GROUP BY year;

-- Q9

SELECT YEAR(date) AS year,

MAX(confirmed) AS max\_confirmed,

MAX(deaths) AS max\_deaths,

MAX(recovered) AS max\_recovered

FROM corona\_virus\_dataset

GROUP BY year;

-- Q10

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

SUM(confirmed) AS total\_confirmed,

SUM(deaths) AS total\_deaths,

SUM(recovered) AS total\_recovered

FROM corona\_virus\_dataset

GROUP BY month

Order By month;

-- Q11

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

SUM(confirmed) AS total\_confirmed,

AVG(confirmed) AS avg\_confirmed,

VARIANCE(confirmed) AS var\_confirmed,

STDDEV(confirmed) AS stdev\_confirmed

FROM corona\_virus\_dataset

GROUP BY month

Order By month;

-- Q12

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

SUM(deaths) AS total\_deaths,

AVG(deaths) AS avg\_deaths,

VARIANCE(deaths) AS var\_deaths,

STDDEV(deaths) AS stdev\_deaths

FROM corona\_virus\_dataset

GROUP BY month

Order By Month;

-- Q13

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

SUM(recovered) AS total\_recovered,

AVG(recovered) AS avg\_recovered,

VARIANCE(recovered) AS var\_recovered,

STDDEV(recovered) AS stdev\_recovered

FROM corona\_virus\_dataset

GROUP BY month

Order By month;

-- Q14

SELECT Province, SUM(confirmed) AS total\_confirmed

FROM corona\_virus\_dataset

GROUP BY Province

ORDER BY total\_confirmed DESC

LIMIT 1;

-- Q15

SELECT Province, SUM(deaths) AS total\_deaths

FROM corona\_virus\_dataset

GROUP BY Province

ORDER BY total\_deaths ASC

LIMIT 1;

-- Q16

SELECT Province, SUM(Recovered) AS total\_recovered

FROM corona\_virus\_dataset

GROUP BY Province

ORDER BY total\_recovered DESC

LIMIT 5;