CORONA VIRUS DATASET ANALYSIS

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Q1.Write a code to check NULL values

```
SELECT *FROM corona.dbo.Covid19Data
                  WHERE
            Province ISNULLOR
      Country_Region ISNULLOR
           Latitude ISNULLOR
          Longitude ISNULLOR
            DateISNULLOR
          Confirmed ISNULLOR
           Deaths ISNULLOR
          Recovered ISNULL;
```

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

```
UPDATE corona.dbo.Covid19Data
SET
 Province=COALESCE(Province,'Unknown'),
Country_Region=ISNULL(Country_Region,
'Unknown'),
 Latitude=ISNULL(Latitude, 0),
 Longitude=ISNULL(Longitude, 0),
Date=ISNULL(Date,'Unknown'),
 Confirmed=ISNULL(Confirmed, 0),
 Deaths=ISNULL(Deaths, 0),
 Recovered=ISNULL(Recovered, 0)

USE corona
--Checking the Table for updates made in Q2.
SELECT*FROM Covid19Data
WHERE Province ='Unknown'ORDateISNull
```

Q3.check total number ofrows

```
SELECT COUNT(*) AS Total_No_Rows
FROM corona.dbo.Covid19Data
```

Q4.Check what is start_date and end_date

```
SELECTMIN(Date)ASstart_date,
MAX(Date)AS End_Date
FROM corona.dbo.Covid19Data
```

Q5.Number of month present in dataset

```
SELECT
COUNT(DISTINCTCONCAT(YEAR(Date)
,'-',MONTH(Date)))AS
Number_of_Months
FROM
corona.dbo.Covid19Data;
```

Q6.Find monthly average for confirmed, deaths, recovered

SELECTYEAR(Date)ASYear, DATENAME(MONTH,Date)ASMonth,

AVG(Confirmed)AS Avg_Confirmed,

AVG(Deaths)AS Avg_Deaths,

AVG(Recovered)AS Avg_Monthly_Recovered

FROM

Covid19Data

WHERE

YEAR(Date)IN(2020, 2021)

GROUPBY

YEAR(Date),

DATENAME(MONTH,Date)

ORDERBY

YEAR(Date),

Avg_Confirmed, Avg_Deaths, Avg_Monthly_Recovered,Month;

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

SELECTMonth(Date)As Months, Confirmed, Deaths, Recovered,COUNT(*)AS Frequency
FROM Covid19Data GROUPBYMonth(Date), Confirmed, Deaths, Recovered
ORDERBYMonth(Date),Count(*)DESC;

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

SELECTMONTH(Date)As Months, MIN(Confirmed)AS Min_Confirmed,Min(Deaths)AS Min_Deaths,
 MIN(Recovered)AS Min_Recovered FROM Covid19Data
GROUPBYMONTH(Date)

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

 SELECTMONTH(Date)As Months, MAX(Confirmed)AS Max_Confirmed,
 MAX(Deaths)AS Max_Deaths, MAX(Recovered)AS Max_Recovered
 FROM Covid19Data GROUPBYMONTH(Date)
 ORDERBYMONTH(Date);

10 **The total number of case of confirmed, deaths, recovered each month**
SELECTMonth(Date)AsMonth, SUM(Confirmed)AS Total_Confirmed,
SUM(Deaths)AS Total_Deaths, SUM(Recovered)AS Toatl_Recovered
from Covid19Data GROUPBYMONTH(Date) ORDERBYMONTH(Date);
SELECT SUM(Confirmed)AS Total_Confirmed, SUM(Deaths)AS Total_Deaths,
SUM(Recovered)AS Total_Recovered from Covid19Data

11 **Check how corona virus spread out with respect to confirmed case**
SELECTSUM(Confirmed)AS Total_ConfirmedCases, AVG(Confirmed)AS
AVG_ConfirmedCases, VAR(Confirmed)AS Variance_ConfirmedCases,
STDEV(Confirmed)AS STDev_ConfirmedCases FROM Covid19Data

12 **Check how corona virus spread out with respect to death case per month**
Select MONTH(Date) AS Month,SUM(Deaths) AS Total_Deaths, AVG(Deaths) AS
AVG_Deaths VAR(Deaths) AS Variance_Deaths,   STDEV(Deaths) AS STDev_Deaths
FROM Covid19Data GROUP BY MONTH(Date) ORDER BY MONTH(Date);

Q13. Check how corona virus spread out with respect to recovered case

SELECT SUM(Recovered) AS Total_Recovered, AVG(Recovered) AS AVG_Recovered, VAR(Recovered) AS Variance_Recovered,   STDEV(Recovered) AS STDev_Recovered FROM Covid19Data

Q14. Find Country having highest number of the Confirmed case

SELECT TOP 1 Country_Region, SUM(Confirmed) AS Highest_ConfirmedCases FROM Covid19Data GROUP BY Country_Region ORDER BY Highest_ConfirmedCases DESC;

Q15. Find Country having lowest number of the death case

SELECT TOP 1 Country_Region, SUM(Deaths) AS Lowest_DeathCases FROM Covid19Data GROUP BY Country_Region ORDER BY Lowest_DeathCases ASC

Q16. Find top 5 countries having highest recovered case

SELECT TOP 5 Country_Region, SUM(Recovered)AS Highest_RecoveredCases FROM Covid19Data GROUPBY Country_Region ORDERBY Highest_RecoveredCases DESC;

THANK YOU