



MEDICAL
CENTER

COVID-19

REPORT

LET'S TALK ABOUT IT

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

```
UPDATE covid
SET
    Confirmed = COALESCE(Confirmed, 0),
    Deaths = COALESCE(Deaths, 0),
    Recovered = COALESCE(Recovered, 0)
WHERE
    Confirmed IS NULL AND DEATHS IS NULL
    AND Recovered IS NULL;
```

What is Start_date and End_date

```
SELECT  
    MIN(Date) AS start_date, MAX(Date) AS end_date  
FROM  
    covid;
```

OUTPUT

	start_date	end_date
▶	2020-01-22	2021-06-13

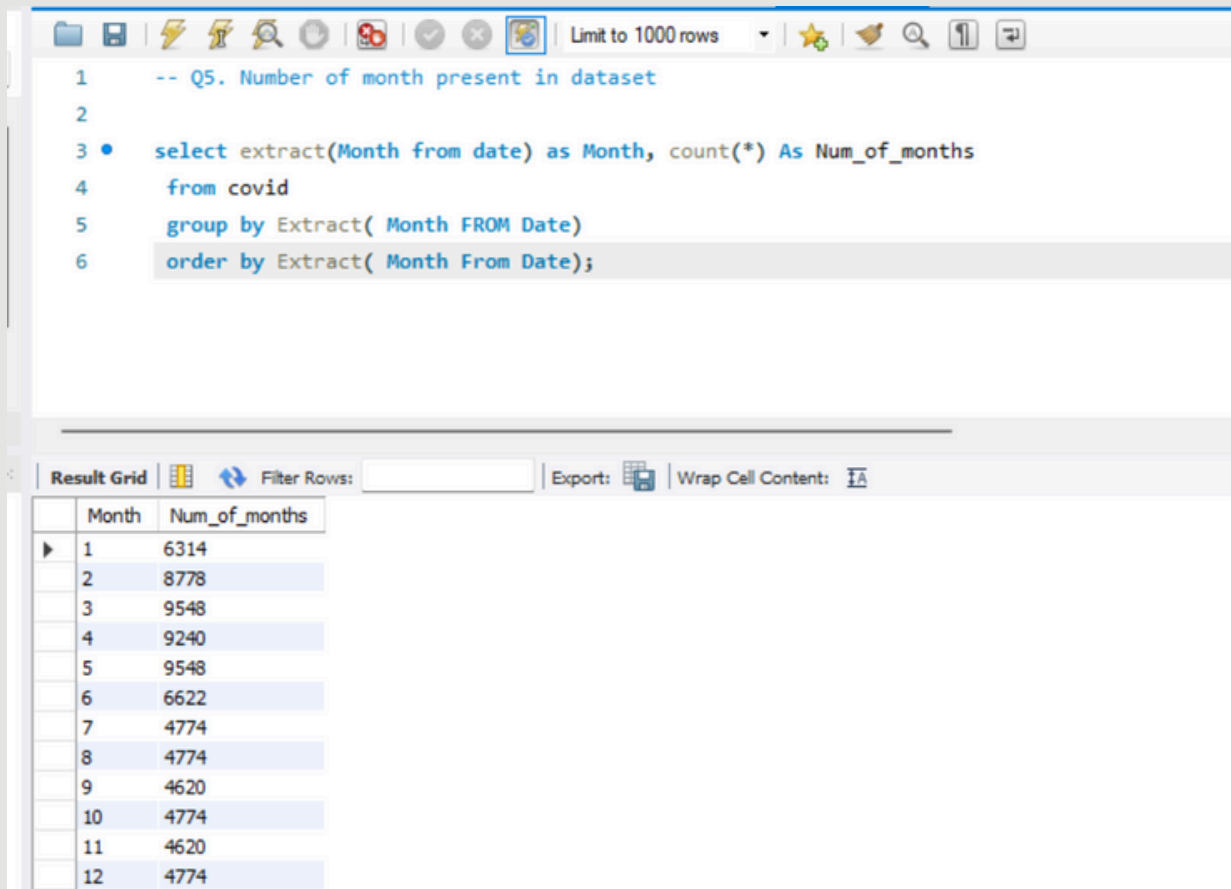
Total Number Of Rows

```
SELECT  
    COUNT(*) AS total_rows  
FROM  
    covid
```

Output:-

	total_rows
▶	78386

Number of month present in dataset



The screenshot shows a SQL IDE interface. The top toolbar includes icons for file operations, execution, and a dropdown menu set to 'Limit to 1000 rows'. The SQL editor contains a query to count the number of months in a dataset. The bottom toolbar shows 'Result Grid', 'Filter Rows', 'Export', and 'Wrap Cell Content'. The results are displayed in a table with two columns: 'Month' and 'Num_of_months'.

```
1  -- Q5. Number of month present in dataset
2
3  • select extract(Month from date) as Month, count(*) As Num_of_months
4      from covid
5      group by Extract( Month FROM Date)
6      order by Extract( Month From Date);
```

	Month	Num_of_months
▶	1	6314
	2	8778
	3	9548
	4	9240
	5	9548
	6	6622
	7	4774
	8	4774
	9	4620
	10	4774
	11	4620
	12	4774

Find monthly average for confirmed, deaths, recovered

```
select
extract(Month from date) as Month,
extract(Year from date) as Year,
Round(avg(confirmed),3) AS AVG_confirmed,
Round(avg(Deaths),3) AS AVG_deaths,
Round(avg(recovered),3) AS AVG_Recovered
From covid
group by
extract(YEAR FROM date) ,
extract(month from date)
ORDER BY
extract(YEAR FROM date) ,
extract(month from date)
```

OUTPUT :-

Month	Year	AVG_confirmed	AVG_deaths	AVG_Recovered
1	2020	4.145	0.123	0.093
2	2020	15.296	0.594	7.032
3	2020	161.130	8.661	27.874
4	2020	505.800	41.522	171.642
5	2020	574.850	30.281	318.296
6	2020	859.228	29.818	548.792
7	2020	1432.361	35.110	983.058
8	2020	1611.843	37.537	1299.295
9	2020	1784.587	34.777	1438.907
10	2020	2412.200	36.758	1420.643
11	2020	3592.194	56.763	1985.345
12	2020	4050.440	71.218	2497.885
1	2021	3911.229	84.184	1919.637
2	2021	2433.364	69.165	1558.392
3	2021	2916.797	59.200	1652.286
4	2021	4699.355	78.439	3074.785
5	2021	1125.871	55.777	1127.511

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

```
WITH AggregatedData As (  
  Select  
    extract(Year from date) As Year,  
    extract(Month from date) as Month,  
    GROUP_CONCAT(Confirmed ORDER BY Confirmed DESC SEPARATOR ',') AS AggConfirmed,  
    GROUP_CONCAT(Deaths ORDER BY Deaths DESC SEPARATOR ',') AS AggDeaths,  
    GROUP_CONCAT(Recovered ORDER BY Recovered DESC SEPARATOR ',') AS AggRecovered  
  From Covid  
  group by Year,Month  
)  
Select Year,Month,  
  SUBSTRING_INDEX(AggConfirmed,',',1) AS MostFrequentConfirmed,  
  SUBSTRING_INDEX(AggDeaths,',',1) AS MostFrequentDeaths,  
  SUBSTRING_INDEX(AggRecovered,',',1) AS MostFrequentRecovered  
From AggregatedData  
Order by Year, Month;
```




OUTPUT

	Year	Month	MostFrequentConfirmed	MostFrequentDeaths	MostFrequentRecovered
▶	2020	1	2131	49	51
	2020	2	14840	242	3418
	2020	3	26314	1085	4289
	2020	4	50740	2607	33227
	2020	5	34907	2309	51717
	2020	6	54771	2003	94305
	2020	7	75866	1595	140050
	2020	8	85687	1505	95881
	2020	9	97894	1703	101468
	2020	10	99264	3351	388340
	2020	11	207933	2259	139292
	2020	12	823225	3752	1123456
	2021	1	300462	4475	87090
	2021	2	134975	3907	98389
	2021	3	100158	3869	102138
	2021	4	401993	4249	299988
	2021	5	414188	4529	422436
	2021	6	134154	7374	231456

Find minimum values for confirmed, deaths, recovered per year

```
select
extract(YEAR FROM DATE) AS YEAR,
MIN(Confirmed) AS Min_confirmed,
MIN(deaths) AS Min_deaths,
MIN(recovered) AS Min_recovered
from
covid
group by
extract(YEAR FROM DATE)
order by |
year;
```

OUTPUT :-

Result Grid   Filter Rows: <input type="text"/> Export: 				
	YEAR	Min_confirmed	Min_deaths	Min_recovered
▶	2020	0	0	0
	2021	0	0	0

Find maximum values of confirmed, deaths, recovered per year

```
select  
extract(Year from date) as Year,  
MAX(confirmed) as Max_confirmed,  
MAX(deaths) as Max_deaths,  
MAX(recovered) as Max_recovered  
from  
covid  
group by  
extract(Year from Date)  
order by  
year;
```

OUTPUT :-

	Year	Max_confirmed	Max_deaths	Max_recovered
▶	2020	823225	3752	1123456
	2021	414188	7374	422436

Total Number of case of confirmed, deaths, recovered each month

```
select
extract(year from date) as Year,
extract(Month from date) as Month,
sum(confirmed) as Total_confirmed,
sum(deaths) as Total_deaths,
sum(recovered) as Total_recovered
from
covid
group by
extract(Month from date),
extract(year from date)
order by
Year,
Month;
```

OUTPUT :-

	Year	Month	Total_confirmed	Total_deaths	Total_recovered
▶	2020	1	6384	190	143
	2020	2	68312	2651	31405
	2020	3	769236	41346	133070
	2020	4	2336798	191833	792987
	2020	5	2744333	144561	1519547
	2020	6	3969634	137757	2535417
	2020	7	6838092	167613	4693120
	2020	8	7694938	179200	6202833
	2020	9	8244794	160671	6647749
	2020	10	11515841	175484	6782150
	2020	11	16595938	262247	9172292
	2020	12	19336799	339996	11924903
	2021	1	18672205	401893	9164347
	2021	2	10492664	298239	6719785
	2021	3	13924790	282620	7888013
	2021	4	21711021	362387	14205507
	2021	5	19121083	366549	19131842
	2021	6	5022282	132657	5544438

Check how corona virus spread out with respect to confirmed case (Eg.: total confirmed cases, their average, variance & STDEV)

```
select
sum(Confirmed) as total_Confirmed,
Round(avg(Confirmed),3) as Avg_Confirmed,
variance(Confirmed) as Var_Confirmed,
stddev(Confirmed) as Std_Confirmed
from
covid
```

OUTPUT :-

	total_Confirmed	Avg_Confirmed	Var_Confirmed	Std_Confirmed
►	169065144	2156.828	157288925.07796532	12541.488152446875

Check how corona virus spread out with respect to death case per month(Eg.: total confirmed cases, their average, variance & STDEV)

```
• select
  extract(month from date) as Month,
  sum(Confirmed) as Total_confirmed,
  Round(avg(Confirmed),2) as Avg_Confirmed,
  Round(variance(Confirmed),2) as Var_Confirmed,
  Round(stddev(Confirmed),2) as Std_Confirmed
From
covid
group by
extract(month from date)
order by
Month;
```

OUTPUT :-

	Month	Total_confirmed	Avg_Confirmed	Var_Confirmed	Std_Confirmed
▶	1	18678589	2958.28	241973521.82	15555.5
	2	10560976	1203.12	40597067.13	6371.58
	3	14694026	1538.96	44274264.91	6653.89
	4	24047819	2602.58	258409110.21	16075.11
	5	21865416	2290.05	320297513.2	17896.86
	6	8991916	1357.89	43725047.85	6612.49
	7	6838092	1432.36	46914022.89	6849.38
	8	7694938	1611.84	54408583.16	7376.22
	9	8244794	1784.59	69314698.6	8325.54
	10	11515841	2412.20	68988159.05	8305.91
	11	16595938	3592.19	195815877.81	13993.42
	12	19336799	4050.44	459885446.66	21444.94

Check how corona virus spread out with respect to recovered case

```
select
sum(Confirmed) as Total_Confirmed,
Round(avg(Confirmed),2) as Avg_Confirmed,
variance(Confirmed) as Var_Confirmed,
stddev(Confirmed) as std_confirmed
from
covid
```

OUTPUT :-

	Total_Confirmed	Avg_Confirmed	Var_Confirmed	std_confirmed
▶	169065144	2156.83	157288925.07796532	12541.488152446875

Find Country having highest number of the Confirmed case

```
select
Country_Region,
sum(Confirmed) as Total_confirmed
FROM
Covid
Group By
Country_Region
Order by
Total_confirmed DESC
LIMIT 5;
```

OUTPUT :-

	Country_Region	Total_confirmed
►	US	33461982
	India	29460523
	Brazil	17412766
	France	6106009
	Turkey	5330447

Find Country having lowest number of the death case

```
Select
Country_Region,
Min(Deaths) as Min_Death
From
covid
group by Country_Region
order by
MIN_Death DESC
limit 5;
```

OUTPUT :-

	Country_Region	Min_Death
►	Afghanistan	0
	Algeria	0
	Argentina	0
	Australia	0
	Austria	0

Find top 5 countries having highest recovered case

```
select
Country_Region,
sum(Recovered) as Highest_Recovered
FROM
covid
group by
Country_region
order by
Highest_Recovered DESC
limit 5;
```

OUTPUT :-

	Country_Region	Highest_Recovered
►	India	28089649
	Brazil	15400169
	US	6303715
	Turkey	5202251
	Russia	4745756

THANK

YOU