# COVID-19 Analysis using SQL

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# Introduction

The COVID-19 pandemic has had a profound impact on global health, economies, and daily life. As a data analyst, my role in understanding and managing this crisis is crucial. Here's how I approached COVID-19 data analysis:

- Firstly, data collection is essential. Key data points include Country, Date, Confirmed, Deaths and Recovered cases.
- Perform data analysis. Dive into the data to identify patterns, and overview.
- Consider time series analysis. Investigate how COVID-19 metrics change over time.
- Explored distribution of cases based on demographics, and geographic locations.

# Overview

Our data analysis journey delves into the intricate landscape of COVID-19 pandemic, leveraging SQL to extract valuable insights from a dataset. Here's a synopsis of the key tasks we tackled:

- Check for NULL Values
- Total Number of Rows
- Start and End Date
- Number of Months Present
- Monthly Averages for Cases
- Most Frequent Values by Month
- Minimum and Maximum Values per Year
- Total Cases per Month
- Spread Analysis with Respect to Confirmed Cases
- Analysis with Respect to Death Cases
- Analysis with Respect to Recovered Cases
- Country-level Analysis
- Top Countries with Highest Recovered Cases

# Analysis and Insights

- This are the Top 5 Countries with total Confirmed and Recovered case within the span of 18 months from Jan 2020 to Jun 2021

| | Country/Region | highest_recovered_case |
|---|---|---|
| 1 | India | 28089649 |
| 2 | Brazil | 15400169 |
| 3 | US | 6303715 |
| 4 | Turkey | 5202251 |
| 5 | Russia | 4745756 |

| | Country/Region | highest_confirmed_case |
|---|---|---|
| 1 | US | 33461982 |
| 2 | India | 29460523 |
| 3 | Brazil | 17412766 |
| 4 | France | 6106009 |
| 5 | Turkey | 5330447 |

| | Country/Region | highest_deaths_case |
|---|---|---|
| 1 | US | 599769 |
| 2 | Brazil | 487401 |
| 3 | India | 370730 |
| 4 | Mexico | 230150 |
| 5 | Peru | 188708 |

| | total_confired_case | total_deaths_case | total_recovered_case |
|---|---|---|---|
| 1 | 169065144 | 3647894 | 113089548 |

- The total number of Confirmed cases were 169,065,144, deaths cases were 3,647,894 and total recovered cases were 113,089,548.
- With the highest death cases of 401,893 in Jan 2021, highest confirmed cases of 21,711,021 in April 2021 and highest recovered cases of 19,131,842 in May 2021 as per the Analysis
- Within 6 months of 2021, total confirmed, deaths and recovered cases were higher compared to 2020.

| Questions | Findings |
| --- | --- |
| Were NULL Values present in Dataset? | No NULL Values were present in Dataset |
| Number of month present in dataset | 18 Months (Jan 2020 – Jun 2021) |
| Total Number of Rows | 78386 |
| Country having highest number of the Confirmed case | US, India, Brazil, France, Turkey |
| Top 5 Countries having highest recovered case | India, Brazil, US, Turkey, Russia |
| Country having lowest number of death case | Marshall Islands (0), Samoa (0), Kiribati (0), Dominica (0), Bhutan (1) |

# Conclusion

In this data analysis journey, I've delved into the intricate world of COVID-19. My exploration has revealed patterns, trends, and critical insights. As I wrap up, consider the following key takeaways:

- The pandemic has affected lives, families, and communities. My analysis serves as a reminder of the urgency to combat the virus collectively.
- By analyzing COVID-19 data, we empower decision-makers, healthcare professionals, and policymakers to make informed choices.

Data analysis isn't just about charts and equations- it's about making a difference. Let's stay vigilant, compassionate, and committed to a healthier future.

Thank you for joining me.

Stay safe and continue your learning