COVID-19 Project Report

Introduction

The COVID-19 pandemic impacted every country worldwide, and analysing real-time data became crucial for decision-making. This project focuses on analysing COVID-19 statistics using SQL to gain insights into confirmed cases, deaths, and recovery trends across countries.

Abstract

The dataset contains information such as country/region, date, confirmed cases, deaths, and recovered patients. The data was imported into a MySQL database, and various SQL queries were written to generate insights such as total cases, top-affected countries, death rates, and daily trends. Views and aggregate queries were also created to simplify analysis.

Tools Used

MySQL Workbench (for database operations)

CSV dataset (Kaggle source)

SQL queries and views for analytics

Steps Involved

1. Created a database covid19 and a table covid_stats.
2. Imported the dataset and ensured proper column formatting.
3. Wrote 10+ SQL queries including aggregations (SUM, AVG,ROUND), grouping (GROUP BY, HAVING, ORDER BY), and subqueries.
4. Created views such as country_summary for simplified analysis.
5. Generated insights like top 10 affected countries and death/recovery rates.

Sample queries & insights

1. Total confirmed cases globally :

SQL: SELECT SUM(totalcases) AS total_cases FROM worldometer_data;

Insight: Total global confirmed cases = 17546048 (as per dataset).

2. Top 5 countries with highest cases:

SQL: SELECT Country_Region,SUM(confirmed) AS total_cases FROM country_wise_latest GROUP BY country_region ORDER BY total_cases DESC LIMIT 5;

Insight: USA, Brazil, India, Russia, south Africa.

3. Death rate per country:

SQL: SELECT country_region, (SUM(deaths)/SUM(confirmed))*100 AS death_rate FROM country_wise_latest GROUP BY country_region ORDER BY death_rate DESC;

Insight: Countries like Yemen and United Kingdom show higher death rates.

Conclusion

This project helped me gain real-time analytical experience with SQL. I learned to clean datasets, perform advanced queries, and extract actionable insights. These skills will help in building dashboards or further predictive analytics.