



DSA : Group D

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Dictionary :

1. Date Dimension

Table Name: Date_dimension

Fields:

- DateRep: Date represented in the format of YYYY-MM-DD.
- Day: Day of the month.
- Month: Month as a numeric value .
- Year: Year

2. Geography Dimension

Table Name: Geography_dimension

Fields:

- Countries And Territories: Name of the country or territory.
- geoId: Geographic identifier code (e.g., AF for Afghanistan).
- country territory Code: Standardized code for countries/territories.
- continentExp: Name of the continent (e.g., Asia, Europe).

3. Population Dimension

Table Name: Population_dimension

Fields:

- popData2019: Population data for the year 2019.

4. Covid Fact Table

Table Name: Covid_fact

Fields:

- cases: Daily reported cases.
- deaths: Daily reported deaths.
- cumulative Cases: Computed cumulative number of cases over time.
- Cumulative_number_for_14_days_of_COVID-19_cases_per_100000: Rolling 14-day cumulative cases per 100,000 population (for trends and ratios)

Tableau Data

1. Organize Folders:

Dimensions Folder:

- Date_dimension
- Geography_dimension
- Population_dimension

Measures Folder:

- cases
- deaths
- Cumulative_number_for_14_days_of_COVID-19_cases_per_100000

2. Computed Fields:

Calculated fields:

- Case Fatality Rate: $(\text{deaths} / \text{cases}) * 100$
- CaseRateper100k : $(\text{cases} / \text{popData2019}) * 100000$

Graphs :

1) Temporal Trends in Cases

- Chart Type : Line chart
- X- axis : Date(daterep)
- Y – axis: Daily cases and cumulative cases
- Filters : By continentExp
- Purpose : It highlights how the pandemic evolved over time, showing peaks and downward trends.

2) Geographic Distribution of Cases

- Chart Type : Filled Map
- Country or region boundaries represented on a map.
- Color intensity based on caseRatePer100k or total cases.
- Purpose: It displays the global or regional spread of the virus, allowing for spatial analysis.

3) Population Impact Analysis

- Chart Type : Bar Chart
- X – axis : countriesAndTerritories
- Y -axis : caseFidelityRate

- Purpose : It normalizes the impact of COVID – 19 by population size and highlights disparities between regions.

Theme Analysis :

Theme : “Analysis of COVID-19 Cases by Region and Over Time to Understand Geographic and Temporal Trends in the Pandemic”

Objective :

- It Provides insights of how COVID – 19 cases have varied across different geographic regions with respect to time.
- It uses data normalization to make good comparisons between regions of different population sizes.
- It explore trends in cases and Fadelities to identify patterns.

Focused Areas :

- Trends :It identify the periods of rapid case growth or decline.
- Geographic distribution : It determines which regions were most severely affected.
- Population impact : It highlights the proportional burden of the pandemic