COVID-19 CASES ANALYSIS

Phase 1: Problem Definition and Design Thinking

Problem Definition:

The project aims to utilize IBM Cognos for analysing COVID-19 data in the EU/EEA region. The primary goal is to compare and contrast the daily mean values and standard deviations of COVID-19 cases and related deaths across different countries. This involves setting analysis objectives, gathering relevant COVID-19 data, creating informative visualizations using IBM Cognos, and extracting valuable insights from the data. Ultimately, the project seeks to provide a comprehensive understanding of the COVID-19 situation in the EU/EEA by examining statistical trends and patterns in cases and fatalities.

Design Thinking:

Here is an overview on how we will be approaching this problem statement:

1. **Analysis Objectives:** The goal is to compare and contrast mean values and standard deviations of COVID-19 cases and deaths per day and by country in the EU/EEA.

2. **Data Collection:** We obtain the provided data file containing COVID-19 cases and deaths information per day and by country in the EU/EEA

   Dataset Link: https://www.kaggle.com/datasets/chakradharmattapalli/covid-19-cases.

3. **Visualization Strategy:**

   Data Analysis – We use IBM Cognos to perform the following analyses:

   Mean Values Comparison: Calculate and compare the average (mean) daily COVID-19 cases and deaths for each country. This helps in understanding the central tendencies in the data.

   Standard Deviations Comparison: Standard deviations will be calculated for both cases and deaths. Comparing these measures helps in understanding the degree of variability or dispersion in the data.

   Visualization Design – We create relevant visualizations in IBM Cognos to represent your findings. We can use line charts, bar graphs, or other types of charts to display trends and comparisons effectively:

   - ❖ Time Series Plots: We create time series line plots for each country to visualize the daily cases and deaths over time.
   - ❖ Bar Charts: We generate bar charts to compare the mean values of daily cases and deaths for different countries.
   - ❖ Error Bars: We use error bar charts to visualize standard deviations, showing the variability around the mean for cases and deaths.
   - ❖ Geospatial Maps: We create a geospatial map to display the geographical distribution of mean case and death rates across EU/EEA countries.

4. **<u>Insights Generation:</u>** We analyse the visualizations to draw meaningful insights. Look for patterns, variations, and correlations in the data:
   - ❖ Based on the analysis, we can provide any recommendations or actionable insights that can help in addressing or mitigating the COVID-19 situation in the EU/EEA
   - ❖ Since the COVID-19 situation is dynamic, we can consider setting up a system for continuous monitoring and updating your analysis regularly to track changes over time.

This project will be focused on analysing COVID-19 cases and deaths data in the EU/EEA using IBM Cognos. By comparing mean values and standard deviations, valuable insights into the pandemic's impact on different countries and its temporal variations were gained. This analysis aids in informed decision-making and ongoing monitoring of the situation.