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**Report on COVID-19 Data Visualization Program**

**1. Overview:**

The COVID-19 Data Visualization Program aims to provide insights into COVID-19 data through visualizations. Implemented in Python, the program utilizes Pandas for data manipulation and Matplotlib for plotting.

**2. Features Included:**

The program focuses on two main visualization features:

* Line Plot: Displays the confirmed cases over time for a specific country.
* Bar Plot: Illustrates the increase of COVID-19 cases in the US over time, skipping every 10 dates.

**3. Usage and Implementation:**

Reading Data: Utilizes Pandas' read\_csv() function to ingest COVID-19 data from a CSV file.

* Line Plot (Confirmed Cases Over Time): The function plot\_confirmed\_cases\_over\_time(country\_name, skip\_dates=5) plots confirmed cases over time for a specified country. Users can adjust the skip\_dates parameter to control the density of dates displayed on the plot.
* Bar Plot (US Cases Over Time): The function plot\_us\_cases\_over\_time() selects the first 5 rows of data for the US, skipping every 10 dates to create a bar plot illustrating the increase in COVID-19 cases over time.

**4. Proof Images:**

Line Plot (Confirmed Cases Over Time for the US):

A graph of a number of cases

Description automatically generated

Bar Plot (US Cases Over Time):

A graph of covid-19

Description automatically generated

Comments:

Observing the COVID-19 trend in the United States through a line graph, we can see a gradual increase over time. Initially, there was a slight uptick, but as time progressed, the increase became exponential, multiplying significantly.

**5. Conclusion:**

The COVID-19 Data Visualization Program provides a simplified approach to exploring COVID-19 data through line and bar plots. These visualizations offer valuable insights into the progression of the pandemic, aiding in understanding trends and patterns over time.