Project Report: COVID-19 Data Analysis and Visualization

1. Introduction:

This Power BI project I named "COVID-19 Analysis & Visualization," for navigating the vast sea of pandemic data. I designed to bring clarity to the global COVID-19 picture, focusing on the real human impact reflected in active cases, the delicate balance of lives lost versus lives recovered, and even a quick check-in on individual countries.

2. What I Hoped to Achieve:

My main aspirations for this Power BI journey were simple yet profound:

- To see and understand the COVID-19 data through intuitive visuals.
- To scroll where active cases were concentrated around the world.
- To understand how different nations experienced both recovery and loss.
- To build a straightforward tool, a "Country Status Checker," so easily could get idea about the situation in a specific place.

3. Where Data Comes From:

The dataset I used to prepare my analysis and visualization is from Kaggle. The name of the dataset is "***Covid Cases and Death Worldwide***" by **Mrityunjay Pathak**.

4. What the Visuals Tell: Stories in the Data

4.1. Active Cases by Country: A Glimpse at the Front Lines

This chart is like a global snapshot of where the virus is most active right now.

- **The Big Picture:** It really hits home to see Japan leading with a staggering 11.0 million active cases, with the USA following at 1.7 million.
- **Who's Most Affected?** Beyond Japan and the USA, we see significant active case numbers in countries like Poland (0.9M), Vietnam (0.9M), Mexico (0.4M), and many others, down to Australia (0.0M).
- **Making it Own:** What's neat is, I can play with the filters – adjust the "Active Cases" slider from 0 to over 10 million or tweak the "Population" slider to focus on countries within a certain size. It really lets me dive into the data that matters most to me.

4.2. Death vs Recovered by Country:

This chart helps to visualize the somber reality of deaths against the hope of recoveries across different nations.

- **A Stark Reality:** The USA stands out significantly, unfortunately, for both high numbers of recovered cases and a substantial number of deaths, exceeding 1.0 million. It's a sobering visual reminder of the scale of impact.

- **Global Footprint:** The other countries like Brazil, India, Russia, Germany, France, Italy, and the UK prominently on this chart, each telling its own story of recovery and loss.
- **Personalizing the View:** Just like the active cases chart, there's a "Population" filter here too, which letting to focus based on country size.

4.3. Country Status Checker: Personal Pandemic Dashboard

This is a truly insightful feature – it lets zoom in on a specific country and understand its unique COVID-19 situation.

- **Afghanistan as an Example:** When I select Afghanistan, I learn it has 14,575 active cases out of its population of 40,754,388. This level of detail makes the numbers feel more tangible. I can easily play around with different countries.
- **A Clear Breakdown:** The donut chart is brilliant for showing the proportions at a glance:
  - ⇒ The vast majority, 89.23% (186K), have recovered.
  - ⇒ Active cases account for 6.99% (15K).
  - ⇒ Sadly, deaths represent 3.78% (8K).
- **Empowering the User:** The dropdown menu means user can easily switch between countries, getting an instant update on their specific circumstances. It's a powerful way to make global data feel local and personal.

5. In Closing: A Tool for Understanding

The "COVID-19 Analysis & Visualization" Power BI project isn't just a collection of charts; it's a window into the pandemic's journey. It empowers to understand global trends, compare how different countries have fared, and even look closely at individual national stories. It’s a truly valuable contribution to public health understanding and, hopefully, fosters a deeper sense of global awareness.