

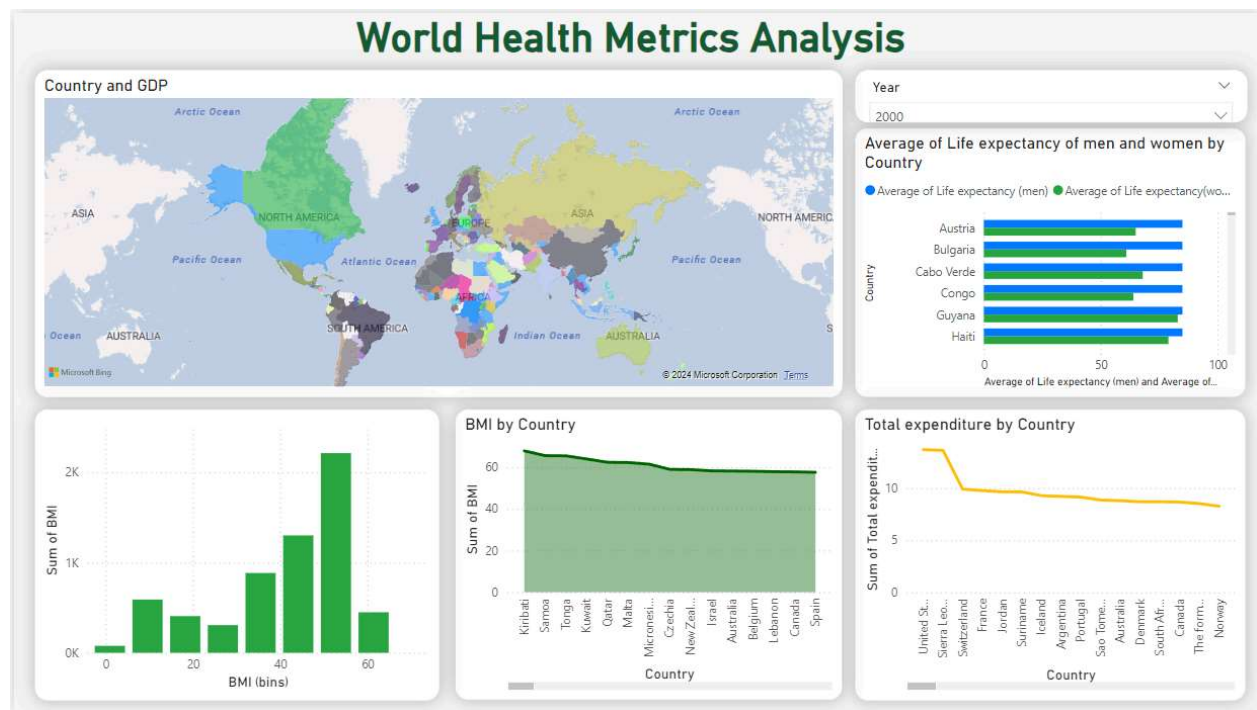
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Lab3

Aim: Design Interactive Dashboards and Storytelling using Tableau / Power BI / R (Shiny) / Python (Streamlit/Flask) / D3.js to be performed on the dataset - Disease spread / Healthcare

- Create interactive dashboard - Write observations from each chart given below
- (Advanced - Word chart, Box and whisker plot, Violin plot, Regression plot (linear and nonlinear), 3D chart, Jitter, Line, Area, Waterfall, Donut, Treemap, Funnel
- Basic - Bar chart, Pie chart, Histogram, Timeline chart, Scatter plot, Bubble plot)

Dashboard:

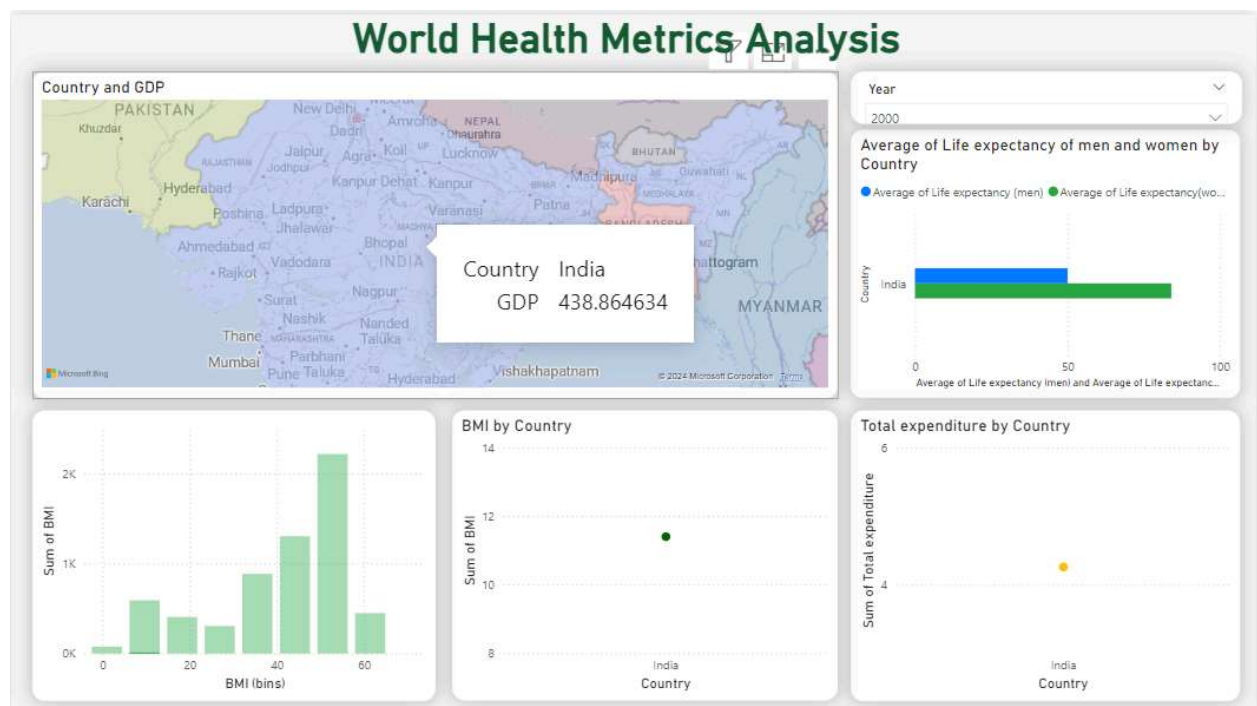


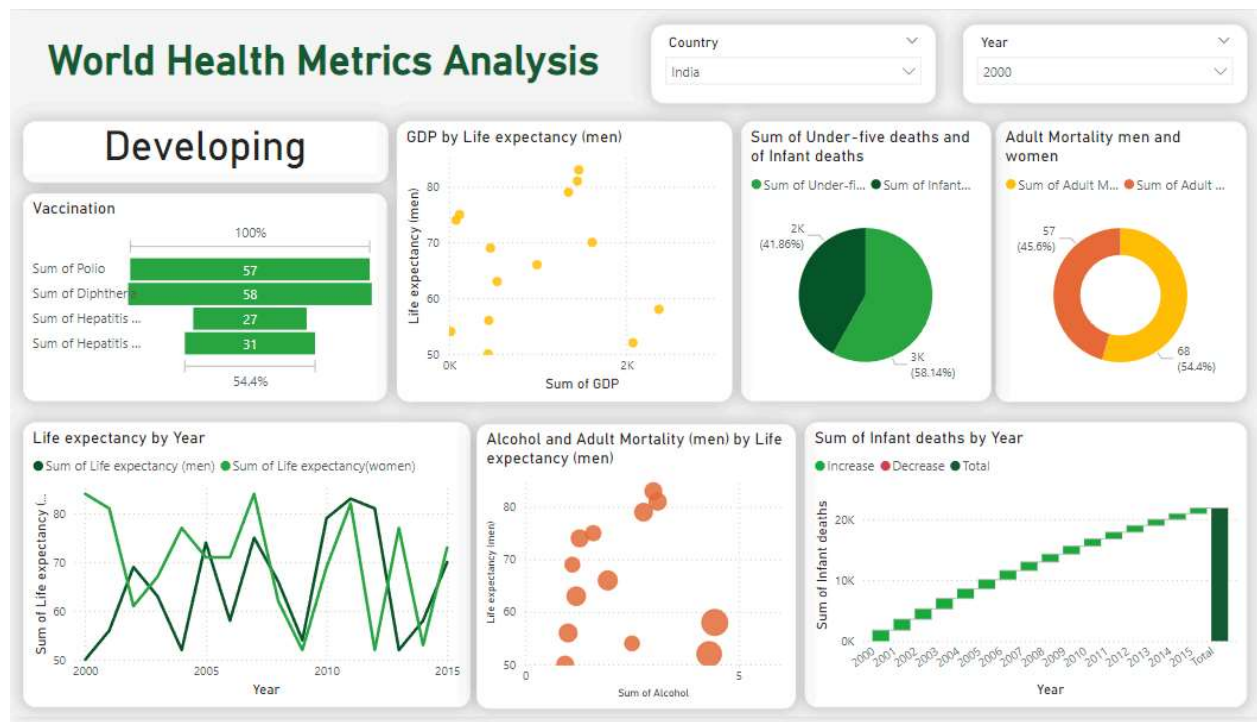
- 1) World map: Displays countries colored by their GDP. Example data point: India with a GDP of 438.864634
- 2) Bar Chart (Men and Women by Country): Shows a comparison of life expectancy between men and women across different countries in 2000. Example: In Austria, women (65) had a lower life expectancy than men(85).

- 3) Histogram (BMI Distribution): The chart shows the distribution of BMI values in various bins (0-20, 20-40, etc.). The largest group of individuals has a BMI between 40 and 60.
- 4) Area Chart (BMI by Country): It Shows the BMI for each country for a year. Kiribati had the highest BMI and Bangladesh had the lowest BMI in year 2000.
- 5) Line chart (Total Expenditure by Country): Shows a decreasing trend of total healthcare expenditure by country. The United States was the highest spender and Germany was the lowest spender.

We can also deduce information by comparing various charts. For example, Bangladesh had a low GDP of 43\$ per capita. As a result the health expenditure of the country is low. Also their BMI is 1.4 (lowest)

When You click on any country in the world Map, you get its statistics in all the other graphs.





- 6) Funnel Chart (Vaccination): Displays the percentage of population vaccinated against diseases like polio, diphtheria, and hepatitis. Eg: In India in 2000, 57% and 58% of one year olds received polio and diphtheria vaccine respectively.
- 7) Card: Tells whether the country is developing or developed. For example, it shows India is a developing country.
- 8) Timeline Chart: Both genders show fluctuations in life expectancy over the years, with noticeable peaks and drops. The lines for men and women suggest that women consistently have a higher life expectancy than men, which is a common global pattern due to biological and social factors.
- 9) Pie chart: the chart shows infant deaths and under-five deaths. Infant deaths account for 58.14%, and under-five deaths 41.86% in India in 2000.
- 10) Donut chart: It shows the percent of mortality rates of men and women. In 2000, the mortality rate of men was 54 % and of women was 45%.
- 11) Waterfall chart : The infant deaths have decreased slowly after 2007. From 2000 to 2015, India has faced more than 20k infant mortality.
- 12) Scatter plot (GDP by Life Expectancy for Men): A scatter plot correlating life expectancy with GDP. No clear linear relationship, but higher GDP countries tend to have higher life expectancies.
- 13) Bubble plot: As alcohol consumption increases, the health outcomes for men in India worsen, reflected in higher mortality rates and a reduction in overall life expectancy.