Tutorial 3 assignment

Overview

In this assignment, you will recreate the target visualisation and then provide an additional improvement visualisation. Use the gapminder-FiveYearData.csv that has been uploaded.

The Target Visualization

Video Demonstration: tutorial 3.mov

Description: The visualization is a dynamic bubble chart with the following characteristics:

- **Data Dimensions:** It maps four variables simultaneously:
  - **X-Axis:** GDP per Capita (using a Logarithmic scale).
  - **Y-Axis:** Life Expectancy (using a Linear scale).
  - **Bubble Size:** Total Population (using a Square Root scale).
  - **Color:** Continent (using a Categorical/Ordinal scale).
- **Interactivity:** An **Year Slider** at the top allows users to scrub through time (1952–2007).
  - As the year changes, bubbles **transition smoothly** to their new positions and sizes.
  - **Tooltips** appear on hover, showing the specific Country Name and Population.

Note: You must implement a `scaleLog` for the X-axis and a `scaleSqrt` for the bubble radius. Using a linear scale for radius is a common error that misrepresents data area.

Once you have successfully recreated the visualization, answer the following in a separate document:

Part A: Look closely at the bubble chart you built. Identify limitations with it (ex-usability, readability, etc.)

Part B: Implement an improvement visualisation (you can just improve things about this visualisation or make a completely different visualisation). Explain why this is better than the original visualisation.

Submission format: Zip the visualisation recreation code (1), improvement visualisation code (2) and the report (explaining limitations with (1) and improvements of (2)) into **<rollno.>_tutorial3.zip**