Cancer Deaths by Country and type of cancer between year 1990-2016

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Introduction:

The *"Cancer Deaths by Country and type of cancer between year 1990-2016 Dashboard"* is an interactive and user-friendly interface for graphically representing and exploring cancer mortality statistics from various categories and years in various nations.

Design Overview:

- **Header**: A separate header with the headline "Cancer Deaths Dashboard" is shown, establishing the dashboard's theme.
- **Sidebar**: The left sidebar contains a set of buttons that allow users to customise the data displayed:
1. Country Selector: A dropdown menu that allows you to select the nation of interest.
2. Cancer type Selector: A dropdown menu that allows you to choose a specific form of cancer.
3. Year Range Slider: A slider that allows you to choose a certain year range for data visualisation.
- **Main Content Area**: Consists of several data visualisation and information boxes:
1. Line Plot: Displays the trend of cancer fatalities for the specified country and cancer type over the set year range.
2. A sideways bar graph provides a different visual viewpoint on the data.
3. Data Table: Displays raw data based on filters specified, allowing users to investigate individual entries.
4. Score Card: A brief box indicating the overall number of fatalities caused by the selected cancer type in the selected nation during the set year period.

Interactivity and Aesthetics:

- Colour Scheme: A blue colour scheme runs across the dashboard, creating a uniform and professional look.
- Interactivity: The charts are interactive thanks to the plotly programme. Hovering over data points reveals more information, increasing user engagement.
- Responsive Design: The dashboard's design is fluid, offering a consistent experience across different screen sizes.

Objective:

The primary purpose is to give stakeholders, researchers, and the general public with a user-friendly tool for exploring and comprehending cancer fatality numbers, hence fostering data-driven decision-making and awareness.

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Appendix: Sources & Their Utilization

Sources Used:

1. **Dataset**: dataset (Cancer Deaths by Country and Type Dataset.csv) contains cancer death data with columns for country, code, year, and several cancer kinds. Source of this dataset is Kaggle https://www.kaggle.com/datasets/antimoni/cancer-deaths-by-country-and-type-1990-2016
2. **shiny**: R's core framework for creating interactive web apps.
   Usage: Serves as the dashboard's backbone, providing both UI and server functions.
3. **shinydashboard**: A shiny plugin created exclusively for constructing dashboards.
   Usage: Elements such as the header, sidebar, and boxes are used to structure the dashboard layout.
4. **plotly**: A graphing library that allows you to interact with charts and graphs.
   Makes static ggplot2 charts into interactive visualisations.
5. **ggplot2**: Enables tooltips on hover. A R tool for data visualisation based on the Grammar of Graphics.
   Usage: Creates the basic visualisations (line and bar plots) that are subsequently refined by plotly.
6. **DataTables** interface in R provides interactive tables.
   Usage: Displays raw data in an interactive table style with scrolling capabilities.