Project: **Build Data Dashboards**

Dataset: **US Census Demographic Data**

In this project, an analysis is performed on the US Census Demographic Data for 2015. The data set includes census data for 50 states and 2 territories. The analysis focuses on the relationship between poverty and income across the states. Three distinct visualizations are created based on the findings. Each visualization is supported by a written summary and an insight.

Visualization 1: **What were the poorest states in the United States in 2015?**
Link:
https://public.tableau.com/profile/tonima.ferdous#!/vizhome/BuildDataDashboardViz123/Viz1

Summary:
The visualization shows the percentage of the population living under poverty level in 2015. A map is generated based on the longitude and latitude values. The map is detailed for the states. Differences in average poverty (in percentage) are presented using colour variations. The view is also filtered on the average poverty rates, ranging from 9.4% to 49.4%. The filter allows the reader to obtain information on any state with a specific poverty rate.

Insight:
In 2015, the average poverty rate was 16.4%. The poorest territory was Puerto Rico with 49.4% of poverty. Other states with high poverty rates were Mississipy, Georgia, Louisiana, Kentucky, Alabama, Arkansas, Arizona, South Carolina, New Mexico, Tennessee, West Virginia, North Carolina, Florida and Missouri. The map indicates that all these states are located in the Southern region of America.

Visualization 2: **How Did Poverty Look Across the United States in 2015?**
Link:
https://public.tableau.com/profile/tonima.ferdous#!/vizhome/BuildDataDashboardViz123/Viz2

Summary:
This dashboard is a combination of two visualizations--a map and a side-by-side bar chart. Fifteen states are identified which had higher poverty rates than the average (16.38%), ranging from 18.1% to 49.4%. A filter is created with these states and applied through the rest of the analysis. The states are Puerto Rico, Mississippy, Georgia, Louisiana, Kentucky, Alabama, Arkansas, Arizona, South Carolina, New Mexico, Tennessee, West Virginia, North Carolina, Florida and Missouri.

The first visualization on the dashboard highlights the filterted states on a map. The difference of poverty rates across the states are presented with colour variations. 'State' is included as both 'label' and 'detail' in the marks card.

The second visualization, a side-by-side bar chart, shows how average poverty and average child poverty are related. The average child poverty rate and the average poverty rate are displayed in two different colour bars for each state.

Insight:
The rate of child poverty was high in the high-poverty states. Moreover, the average child poverty rate was found higher than the average poverty rate for each state. For instance, in Puerto Rico, the rates were 60.2% and 49.4%, respectively.

Visualization 3: **What were the lowest income states in the United States in 2015?**
Link:
https://public.tableau.com/profile/tonima.ferdous#!/vizhome/BuildDataDashboardViz123/Viz3

Summary:
The dashboard contains two visualizations--a bar chart and a packed bubbles chart. The bar chart is generated based on the average median household income for 50 states and 2 territories. Income error data is not considered in this chart.
On the other hand, the bubble chart is filtered on the fifteen states, where the median household incomes were below the average. Here, 'State' is added to 'Colour' and 'Average Poverty' to 'Tooltip'. Colour shows the details about the states and Tooltip helps to compare the values of the average income and poverty rate. The 'Average Income' is added to 'Size' in the marks card. Both the name and average income specific to that state are labeled on the bubbles.
Insight:
In 2015, the average median household income in the United States was $49,868. The lowest income was reported in Puerto Rico with $17,920.
The bubble chart displays the average of income for the lowest income states, ranging from from $17,920 to $44,046. In general, the average median household income was found low in high-poverty the states. Comparing Puerto Rico and Florida, the former displayed a poverty rate of 49.4% and income of $17,920 and the later had a poverty rate of 18.3% and income of $44,046.

Resources:
1.https://www.kaggle.com/muonneutrino/us-census-demographic-data
2. https://www.census.gov/acs/www/data/data-tables-and-tools/narrative-profiles/2015/