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**Course:** DSC640-T301 Data Presentation & Visualization

**Assignment:** Project Task 2 – Design Methodology

1. Overall design choices:
   1. I brought a new windows laptop to understand the use of Power-Bi. For first few visualizations I felt some difficulties but letter on it becomes too easy.
   2. Dataset used airline-safety.csv downloaded from Github (Mehta, 2018)
   3. Color palettes used:
      1. Blue = departures
      2. Red = fatalities accidents
      3. Brown, Orange = incidents
      4. Green = revenue
2. Line chart – US Airline Departures by Year:
   1. Data came from Traffic\_&\_Capacity\_US\_airlines dataset (U.S. Airline Traffic and Capacity, n.d.)
   2. Created the line chart to show the trends of departures by years.
   3. Used the format to updated the title size and name from PowerBI default.
   4. Decided to go with a light/medium shade of blue for US departures.
3. Line chart – World Airline Departures by Year:
   1. Data came from Traffic\_and\_Operations\_\_1929-Present\_World\_airlines dataset (World Airlines Traffic and Capacity, n.d.).
   2. Created the line chart to show the trends of departures by years.
   3. Used the format to updated the title size and name from PowerBI default.
   4. Went with a medium/dark shade of blue for world departures to differentiate from US.
4. Clustered bar chart – Total Fatal Accidents by Airline (1985-2014):
   1. Used main dataset (airline-safety).
   2. Updated title, axis, and legend names.
   3. Went with red palette for fatalities with lighter shade for 2000-2014 and a darker by eye-catching shade for 1985-1999. Reasoning for this was 85-99 had a higher rate of fatal accidents and I wanted to call attention to it from first glance. Red made sense since this is a really bad thing.
5. Clustered bar chart – Total Incidents by Airline (1985-2014):
   1. Used main dataset(airline-safety).
   2. Updated title, axis, and legend names.
   3. Used a brown palette for this one to mimic a caution alert. Used lighter orange for 00- 14 since the totals were smaller and used darker orange to highlight 85-99 since those numbers were higher.
6. Line chart – US Airlines Net Profit by Year:
   1. Used data from Financials\_Full\_Data\_data\_US\_airlines – US Passenger Airlines (Annual Financial Results: U.S. Passenger Airlines, n.d.).
   2. Used line chart again for the trend across years.
   3. Updated title from Power BI default.
   4. Used a green palette for revenue but used a light/medium shade for US net revenue.
7. Line chart – World Airlines Net Profit by Year:
   1. Used data from Annual Financial Results: Financial\_Results\_\_1947-Present\_data\_world\_airlines
   2. Used line chart for the trend across years.
   3. Went with a medium/dark shade of green to differentiate from the US.
   4. Updated title size and name from PowerBI default.

GitHub location-

<https://github.com/dhirajbankar/DSC640.git>