**Name:** Andrea Fox

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

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

1. Overall design choices:
    a. Using Power BI for creating visuals. First, because I did not realize I could adjust the dashboard visual size, so I wanted to see how it worked this time around. Second, this is the tool we use consistently at work so I can take my learning here and apply it there.
    b. Main dataset airline-safety.csv downloaded from Github (Mehta, 2018)
    c. Color palettes:
        i. Blue = departures
        ii. Red = fatalities
        iii. Orange = incidents
        iv. Green = revenue
2. Line chart – US Airline Departures by Year:
    a. Data came from U.S. Airline Traffic and Capacity dataset (U.S. Airline Traffic and Capacity, n.d.)
    b. Chose to do line chart to show the trend rate better across years.
    c. Updated title size and name from PowerBI default.
    d. Decided to go with a light/medium shade of blue for US departures.
3. Line chart – World Airline Departures by Year:
    a. Data came from World Airlines Traffic and Capacity dataset (World Airlines Traffic and Capacity, n.d.).
    b. Used line chart to show trend across years.
    c. Updated title size and name from PowerBI default.
    d. Went with a medium/dark shade of blue for world departures to differentiate from US.
4. Stacked bar chart – Total Fatal Accidents by Airline (1985-2014):
    a. Used main dataset.
    b. Based off critique from task 1, went with stacked bar chart for fatal accidents.
    c. Changed legend to be larger.
    d. Updated title, axis, and legend names.
    e. Added totals for each.
    f. 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. Stacked bar chart – Total Incidents by Airline (1985-2014):
    a. Used main dataset.
    b. Since this was like fatal accidents, I went with the stacked bar chart.
    c. Mirrored legend size to the other stacked bar chart.
    d. Updated title, axis, and legend names.
    e. Used totals at the end of each bar.

    f. Used an orange 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:
    a. Used data from Financial Results – US Passenger Airlines (Annual Financial Results: U.S. Passenger Airlines, n.d.).
    b. Used line chart again for the trend across years.
    c. Updated title from Power BI default.
    d. 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:
    a. Used data from Annual Financial Results: World Airlines (Annual Financial Results: World Airlines, n.d.).
    b. Used line chart for the trend across years.
    c. Went with a medium/dark shade of green to differentiate from the US.
    d. Updated title size and name from PowerBI default.

# References

*Annual Financial Results: U.S. Passenger Airlines*. (n.d.). Retrieved from Airlines for America: https://www.airlines.org/dataset/annual-results-u-s-passenger-airlines/#

*Annual Financial Results: World Airlines*. (n.d.). Retrieved from Airlines for America: https://www.airlines.org/dataset/annual-results-world-airlines/#

Mehta, D. (2018, February 9). *Airline Safety*. Retrieved from Github - fivethirtyeight: https://github.com/fivethirtyeight/data/tree/master/airline-safety

*U.S. Airline Traffic and Capacity*. (n.d.). Retrieved from Airlines for America: https://www.airlines.org/dataset/annual-results-u-s-airlines-2/#

*World Airlines Traffic and Capacity*. (n.d.). Retrieved from Airlines for America: https://www.airlines.org/dataset/world-airlines-traffic-and-capacity/#