PROJECT 4 REPORT

1. FIRST VISUALIZATION

DEPARTURE DELAY PER STATE

LINK
The link for this visual is shown below.
https://public.tableau.com/profile/sotomi.oluwadamilola#!/vizhome/Deliverydelayperstate/Sheet1

SUMMARY
In this visualization, I wanted to get insights on the departure delay for each state for the whole year.
This visualization shows the total departure delay per state recorded. From the map, it can be seen that darker colors represent the states with high departure delays for the year. The state of Texas (TX) can be seen to have the highest departure delay amount for the year round.

DESIGN
A left join was performed between the flight and airport data joining them on origin airport and IATA code columns respectively. This was done in order for the state of each origin airport to be shown.

In a bid to rename the months numbered 1-12, each occurrence of a particular number was grouped to represent the correct month name.
The state and the country fields were dragged into the details shelf in the marks card to show their locations on the map.
The departure delay field was dragged into the colors shelf and to the tool tip shelf under the marks card to differentiate the states by their departure delay. Darker colors represent the states with high departure delays

The grouped month field was used as a filter in order to see the total departure delay amount for each month for all the states

2. SECOND VISUALIZATION

TOTAL DELAY PER AIRLINE

LINK
The link for this visual is shown below
https://public.tableau.com/profile/sotomi.oluwadamilola#!/vizhome/TotaldelayperAirline/Sheet3

SUMMARY
In this visualization, I wanted to get insight on the total delay for each airline.

This visualization shows the total delay for each airline. Each delay is represented by a unique color.

From the visualization, it can be seen that airline WN experienced the most total delays for the whole year. It can also be seen that departure delay contributed the most to the total delay for all airlines for the year round.

DESIGN
The following measures were used in calculating the total delays for each airline

- Air system delay
- Airline delay
- Arrival delay
- Departure delay
- Late aircraft
- Security delay
- Weather delay.

The airline field was dragged to the column shelf while the measure name field was dragged to the row shelf. The measure name field was filtered to show only the delays.
The measures field was dragged into the color shelf under the marks card in order to differentiate the delay types. Colour was used as a visual encoding in this visualization. Color palettes suitable for the colour blind were used.
In a bid to rename the months numbered 1-12, each occurrence of a particular number was grouped to represent the correct month name.
The grouped month field was used as a filter in order to see the total delay amount for each month for all the airlines

3. THIRD VISUALIZATION

FLIGHT DATA DASHBOARD

LINK
The link to the dashboard is shown below
https://public.tableau.com/profile/sotomi.oluwadamilola#!/vizhome/FlightdataDashboard/Dashboard1

SUMMARY
This dashboard shows two visualizations. The first shows the number of cancelled flights for each Airline (bar chart) while the second shows the number of cancelled flights for all the airlines in total caused by weather for each month (line chart).
From the first visualization, it can be seen that airline WN had the highest number of cancelled flights for the year round. They also had the highest number of cancelled flights due to airline/carrier.

From this insight, it isn't advisable to books flights with WN airline considering the number of cancelled flights caused by the airline.

The second visualization also shows us that February is the worst time to book a flight as most flights were cancelled across all airlines due to weather issues in the month of February.

DESIGN

1st visualization

LINK TO VISUALIZATION
https://public.tableau.com/profile/sotomi.oluwadamilola#!/vizhome/FlightdataDashboard/Sheet2

To create the first visualization in the dashboard, the airline field was dragged to the column shelf while the cancelled field was dragged to the row shelf. The cancelled field was changed to measures and count in it drop down menu.

The cancelled field was also used as a filter in this visualization and set to the value 1 indicating cancelled flights.

In a bid to replace the cancellation reasons letters with their correct names, each letter recorded was grouped to represent the correct cancellation reason. Hence the newly created cancellation reason group field.
This field was dragged into the colour shelf under the marks card to be used as a visual encoding. Each colour representing a cancellation reason.

In a bid to rename the months numbered 1-12, each occurrence of a particular number was grouped to represent the correct month name.

The grouped month field was used as a filter in order to see the total number of cancelled flights per month for each airline.

Airline was also used as a filter in order to select which airlines are to be shown

2nd visualiztion

Link to visualization.
https://public.tableau.com/profile/sotomi.oluwadamilola#!/vizhome/FlightdataDashboard/Sheet3
This visualization is set to show the way the number of flights cancelled due to weather varied throughout the year.

In a bid to replace the cancellation reasons with their correct names, each letter recorded was grouped to represent the correct cancellation reason. Hence the newly created cancellation reason group field.

This field was dragged into the filter card to be used to see the way the number of cancelled flights varied throughout the year due to any selected reason.

The selection was set to weather as this is the main focus of the visualization.

Airline was also used as a filter in order to select which airlines data are to be shown.

Airline Filter has been applied to all worksheets in this dashboard using related data source.

Changes made after review.
I edited the month axis and changed the range selection from automatic to fixed. This allowed me to set the required start and end points.

RESOURCES: N/A