Coding Exercise

Thank you for embarking on what we hope will be a fun exercise together. We ask that you begin work on your own time by spending an hour to get the basics working. We will then pair program with you to further develop the solution. We may not get through everything together, which is fine!

Specifications

Please write a single-page JavaScript app that allows users to explore the online data set provided at the URL https://flare-code-exercise-data.s3.amazonaws.com/airlines.json. This data set lists the total number and duration of airline delays occurring at major US airports between the years 2003 and 2016. It also lists the total number of flights and how many were delayed, diverted, canceled, and on time.

Your app should display this data set in tabular format according to the sketch below. This sketch is only intended to convey the structure for data display. Your styling should be a little more attractive to the eye.

Show [% on time] for [2008] at [MDW, ORD]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
MDW	80%	85%	82%	82%	81%	80%	75%	70%	78%	83%	70%	72%	75%
ORD	70%	72%	75%	80%	81%	82%	72%	71%	75%	78%	68%	70%	70%

Please note that the final column should display the total (for number of flights) or mean a.k.a. Average value (for % quantities) for the year.

Everything in [brackets] is a drop list, and the airport code drop list is multi-select. The table rows should be listed in alphabetical order by airport code. The year and airline dropdowns should contain all possible values in the data set. The drop list for the quantity displayed should contain the following:

- number of flights
- % of flights on time
- % of flights canceled
- % of flights diverted
- % of flights delayed
- % of flights delayed due to carrier delay
- % of flights delayed due to late aircraft

- % of flights delayed due to weather
- % of flights delayed due to security
- % of flights delayed due to air traffic control (“National Aviation System” in the data set)

Your web page should have a header and a footer and reasonable horizontal page margins.

Please note: The data set has a typo in it, listing “February” as “Febuary.”

Evaluation Criteria

Your work will be evaluated on the following:

- Correct use of modern JavaScript and its idioms.
- Up-to-date use of your chosen JavaScript framework (React, Vue, Ember, etc.).
- Visually appealing layout and styling of the text, form fields, and tabular data. We are not asking you to be a graphic designer here, but we do want to see that you’ve put some care into how the web page looks, and that you know how to use HTML/CSS.
- Code is overall well organized, clean, and you’ve named things well. No console.log statements, commented out code, unused variables, etc.
- Correct calculation of the Total/Mean column.
- Bonus points for writing some automated tests using Jest or similar.