diff: Changes made to A4

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Number of Jobs

- The previous submission used 3 mapreduce jobs - two separate jobs for getting airport and airline delays and one job for getting activity across airlines and airports.

- In A8, we only use one Mapreduce job which gets mean delays for each flight. This significantly reduces the amount of data that we need to process in R. So we calculate top active airlines and airports in R. This helps us discard the activity job from the previous approach.

Sanity Checks

- The previous submission had an erroneous condition for validating `timezone` values, which resulted in dropping most of the records. In this submission, that is fixed by using `time` subtractions instead of `float` subtractions for Arrival times and departure times.

- With the previous erroneous approach for file `323.csv` we observed 65K valid records. This number increases to 240K+ with the new approach.

The airlineID and airportID hell

- Previously, the numeric IDs for both airlines and airports were used. This resulted in using an extra lookup while plotting graphs.

- In this approach we use `CARRIER` and `DEST` fields in the mapreduce jobs.

Visualizations

Heat Maps, not Network Graphs! - Instead of using network graphs to visualize delays, idea of using heat maps is explored.

Visualizing delays per year and per month - The mean delays for per year and per month were not visualized before, those are visualized and analyzed in the new assignment.