

This test will last 2 hours

Your solution will be evaluated based on code style, design, correctness and efficiency.

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#### GOALS:

- 1) Build a Campaign List
- 2) Build a Dashboard

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#### Campaign List Specs:

- 1) Should fetch the campaigns, list their ids and names
- 2) Clicking either the id or the name should take you to the Dashboard for that campaign (i.e. with cid set to its id)

API Endpoint: localhost:3000/campaigns

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#### Dashboard Specs:

Dashboard should ping server every 5 seconds to get new data for a given cid (clicked in the list).

Start by passing a query param of number=0, and increment it for every ping.

Dashboard should include tiles for:

1. Total Impressions
2. Total Clicks
3. Total CTR
4. Total Users
5. A Simple Moving Average of last 10 data pulls impressions (details at end of this document, if you don't know what one is)
6. Current Number (iteration/pull #)
7. Most Recent Impressions
8. Most Recent Clicks
9. Most Recent CTR
10. Most Recent Users

API Endpoint: localhost:3000/campaigns/:cid?number=num

Endpoint Description: cid is an id from campaign list, num is an int >= 0

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BONUS POINTS (Not necessary):

~ Add crude graphs or any other visualization

~ Make the SMA size a user-input (e.g. let the user choose 10, 20, 50, 100, 200...)

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Simple Moving Average:

[https://en.wikipedia.org/wiki/Moving\\_average](https://en.wikipedia.org/wiki/Moving_average)

$$SMA = \frac{p_M + p_{M-1} + \dots + p_{M-(n-1)}}{n}$$

e.g.: `(data[10] + data[9] + ... + data[0]) / 10`