

FE Coding Task

FE\_Challenge.md

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## Front-end Coding Challenge

### Idea of the App

The task is to implement a small webapp that will list the most starred Github repos that were created in the last 30 days. There will also be a simple drill down feature that displays a time series graph of various metrics for the given repository. You'll be fetching the sorted JSON data directly from the Github API (Github API explained down below).

### Features

- As a User I should be able to list the most starred Github repos that were created in the last 1 week, 2 weeks, 1 month.
- As a User I should be able to identify period of time to search for most starred repos.
- As a User I should see the results as a list. One repository per row.
- As a User I should be able to see for each repo/row the following details :
  - Repository name
  - Repository description
  - Number of stars for the repo.
  - Number of issues for the repo.
  - Username and avatar of the owner.
- As a User I should be able to keep scrolling and new results should appear (pagination).
- As a User I should be able to drill down into each repo and see the commit activity a weekly basis for up to a year of the most recent history of the repo
  - Dropdown option allows for selection for showing additions or deletions vor commits (generally "changes"), which applies to both plots
  - One graph for total number of changes across all contributors per week
    - On hover we should see the exact number of changes, along with the human readable timestamp
  - One graph with a multiline plot, one line for each contributor's total changes per week
    - On hover we see the exact number of changes, along with the human readable timestamp, contributor
    - A different line on the graph should be shown per contributor
    - A legend that allows toggle per contributor
  - Both plots share the same x axis but are separate vertically stacked plots.
- Need human readable x axis labels for weeks by start dates, y axis for counts

### Things to keep in mind 🚧

Your code will be evaluated on:

- whether the technologies required are used
- code structure
- programming best practices
- legibility
- styling and appearance
- responsiveness
- rendering performance

### How to get the data from Github

#### Search Repos

To get the most starred Github repos created in the last 30 days (relative to 2017-11-22), you'll need to call the following endpoint :

```
https://api.github.com/search/repositories?q=created:>2017-10-22&sort=stars&order=desc
```

The JSON data from Github will be paginated (you'll receive around 100 repos per JSON page).

To get the 2nd page, you add &page=2 to the end of your API request :

```
https://api.github.com/search/repositories?q=created:>2017-10-22&sort=stars&order=desc&page=2
```

To get the 3rd page, you add &page=3 ... etc

You can read more about the Github API over [here](#).

#### Commit/Additions/Deletions Activity

You will need the following to get the total weekly additions/deletions activity

```
GET /repos/{owner}/{repo}/stats/code_frequency documentation
```

ex: [https://api.github.com/repos/octocat/hello-world/stats/code\\_frequency](https://api.github.com/repos/octocat/hello-world/stats/code_frequency)

You will need the following to get the total weekly commits activity

```
GET /repos/{owner}/{repo}/stats/commit_activity documentation
```

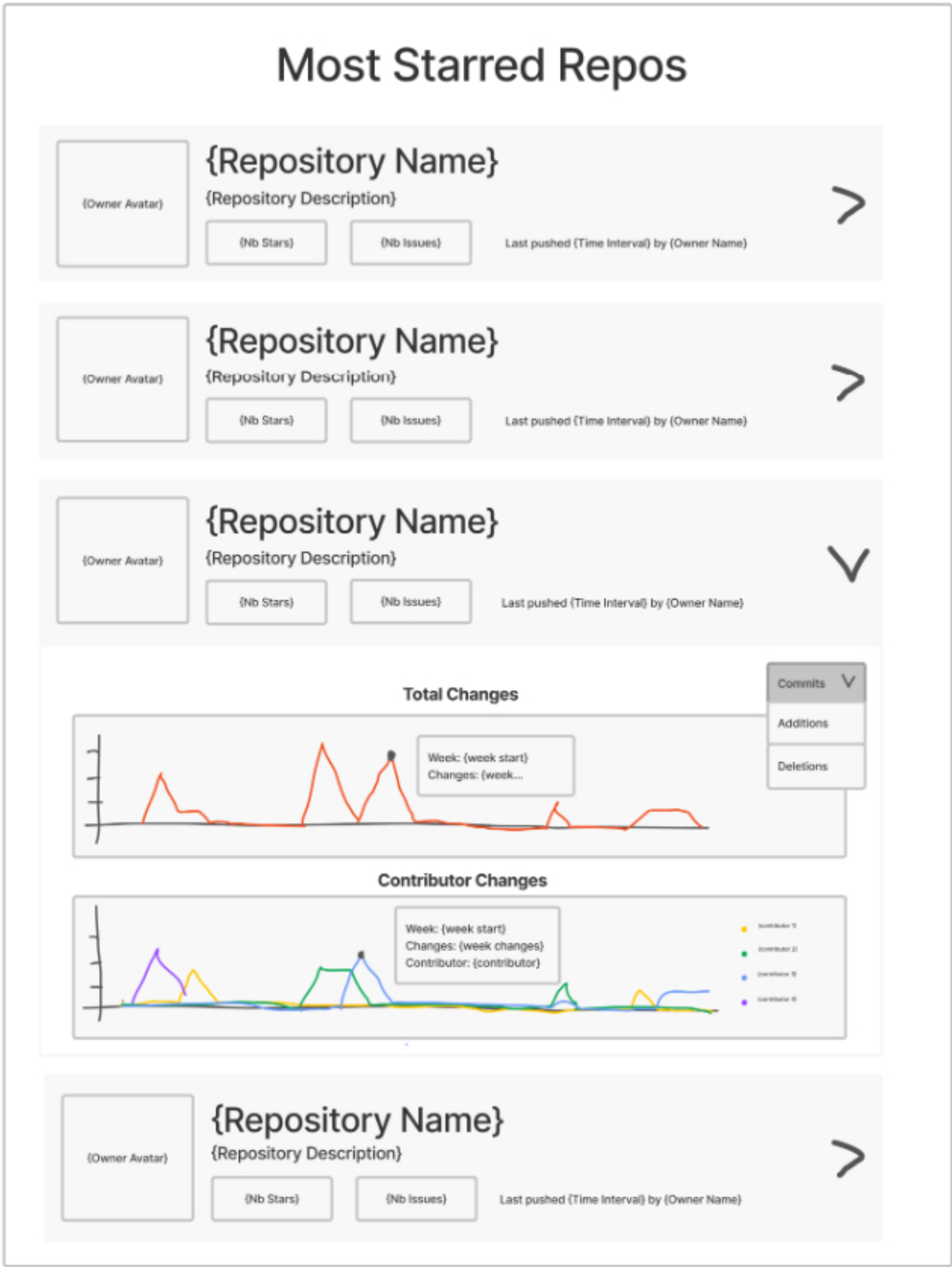
ex: [https://api.github.com/repos/octocat/hello-world/stats/commit\\_activity](https://api.github.com/repos/octocat/hello-world/stats/commit_activity)

You will need the following to get the weekly additions/deletions/commits activity per contributor

```
GET /repos/{owner}/{repo}/stats/contributors documentation
```

ex: <https://api.github.com/repos/octocat/hello-world/stats/contributors>

### Mockup



### Technologies to use

We'd like to see your implementation using the following technologies:

- React (hooks)
- Redux (redux-toolkit.js)
- Redux Saga
- MUI

It is preferred that you use

- Highcharts

### How to submit the challenge solution?

After you finished your app, please follow the instructions below:

1. Create or use an existing account on <https://codesandbox.io> so you can save and share your work
2. Create a sandbox
3. Email including

- time spent
- link to the code sandbox with all necessary dependencies and full implementation



Write Preview

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