First Iteration Demo:
CabX
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1. The date and time at which you already completed this demo, and briefly describe any challenges that arose during the demo.

November 7, 12:30pm. Since we were showcasing the app on a simulator, we cannot click on the Uber / Lyft cards to directly call a ride-hailing service (this functionality is also not yet implemented).

2. The specific user stories and conditions of satisfaction that were demonstrated, with an explanation of any changes since your revised proposal.

We demonstrated CABX-001, CABX-002, CABX-003 and part of CABX-006 as outlined in our revised project proposal. We have not implemented the error message condition specified in the success criteria of CABX-001, CABX-002 and CABX-03 (right now, a default error message shows up rather than a custom pop up), otherwise all other conditions are satisfied. For CABX-006, we demonstrated the ability to save a user's search history. However, instead of storing it in a database, we currently store it as app data.

We have pushed the implementation of CABX-004 and CABX-005 to the second iteration, as approved by our project mentor, Kiran.

Current Tech Stack:

Frontend: JavaScript / React Native

Backend: JavaScript, NodeJS (hosted on AWS)

Persistent Storage: locally stored via React Native (we will implement database storage in

second iteration)

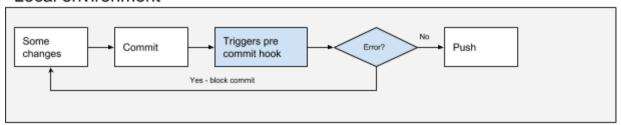
3. A brief discussion of your CI mechanisms, including which technology you used.

We explained our development/deployment workflow (pre and post commit) and demonstrated some examples. In order to provide a full report, first we explain and draft our full workflow and second attached the discussed example.

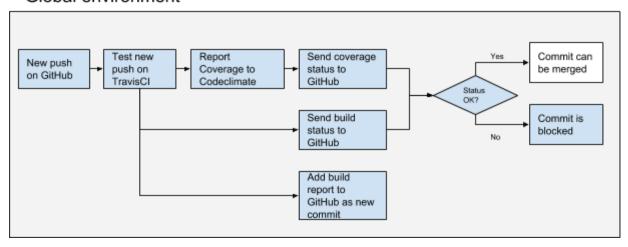
3.1 Full workflow

Manual Automatic action

Local environment



Global environment



3.1.1 Pre commit - pre commit hook

We use the library pre-commit to configure our pre-commit hooks in package.json

Pre-commit defines which scripts are executed. We define the exact commands in the scripts.

The following pre-commit hooks are executed for our project:

- 1. Unit tests with mocha
- 2. Style checker with eslint
- 3. Test coverage with istanbul and mocha

If one of the scripts returns an error, the changes will not be committed. The test coverage is set to 70% for statements, lines and functions.

Examples:

- 1. *Please see appendix for the output of a successful commit
- 2. Unsuccessful unit test:

Returns error message and changes are not commited

3. Unsuccessful style checker:

```
/Users/bennys/Projects/Columbia/05 Adv/04 CabX/CabX/backend/src/getLyft.js
6:1 error Expected indentation of 2 spaces but found 5 indent

*1 problem (1 error, 0 warnings)
1 error and 0 warnings potentially fixable with the `--fix` option.

pre-commit:
pre-commit: We've failed to pass the specified git pre-commit hooks as the `eslint` pre-commit: hook returned an exit code (1). If you're feeling adventurous you can pre-commit: skip the git pre-commit hooks by adding the following flags to your commit: pre-commit: git commit -n (or --no-verify)
pre-commit: This is ill-advised since the commit is broken.
pre-commit:
dyn-160-39-161-130:CabX bennys$
```

Unit test passed, but style checker found an error. One file violated a rule. Changes are not committed

4. Test coverage is too low:

```
26 passing (51ms)
Statements : 44.59% ( 70/157 )
Branches : 35.29% ( 24/68 )
Functions : 43.48% ( 10/23 )
Lines : 44.59% ( 70/157 )
______
ERROR: Coverage for statements (46.63%) does not meet global threshold (70%)
ERROR: Coverage for lines (46.63%) does not meet global threshold (70%)
ERROR: Coverage for functions (48%) does not meet global threshold (70%)
pre-commit:
pre-commit: We've failed to pass the specified git pre-commit hooks as the `coverage`
pre-commit: hook returned an exit code (1). If you're feeling adventurous you can
pre-commit: skip the git pre-commit hooks by adding the following flags to your commit:
pre-commit:
           git commit -n (or --no-verify)
pre-commit:
pre-commit:
pre-commit: This is ill-advised since the commit is broken.
pre-commit:
dyn-160-39-161-130:CabX bennys$
```

Unit test and style checker passed. But the test coverage is below 70%. Changes are not committed

3.1.2 Post Commit

We use the following tools:

- GitHub for version control
- TravisCI for continuous integration
 - Runs unit test and reports to GitHub
 - Reports code coverage to Code Climate
 - Adds reports of post commit build
- Code Climate
 - Reports code coverage criteria to GitHub

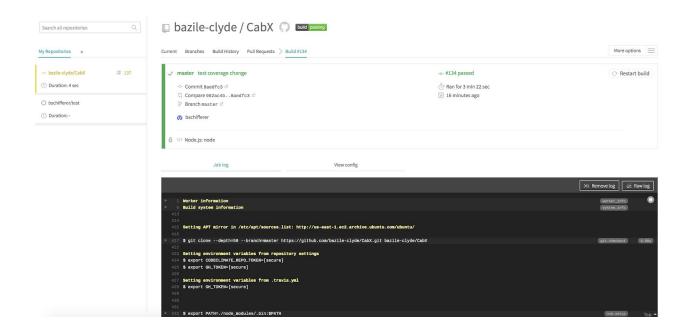
Sequence of post commit:

- 1. There is a new push or merge request on GitHub
- 2. Travis CI starts a machine on Travis Cloud and clones the new push/merge request

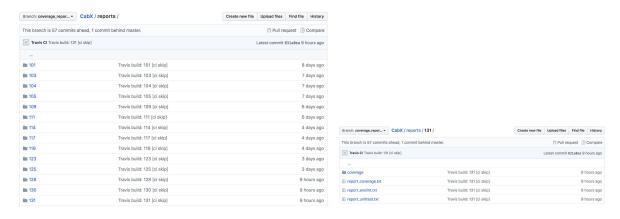
Configuration: .travis.yml

```
language: node_js
node_js:
- node
script:
- npm run coverage
after_script:
- "./node_modules/.bin/codeclimate-test-reporter < ./coverage/lcov.info"
- "npm run test > report_unittest.txt"
- "npm run eslint > report_enslint.txt"
- "npm run coverage_nocheck > report_coverage.txt"
- "./push.sh"
```

3. Travis CI runs the unit test & code coverage



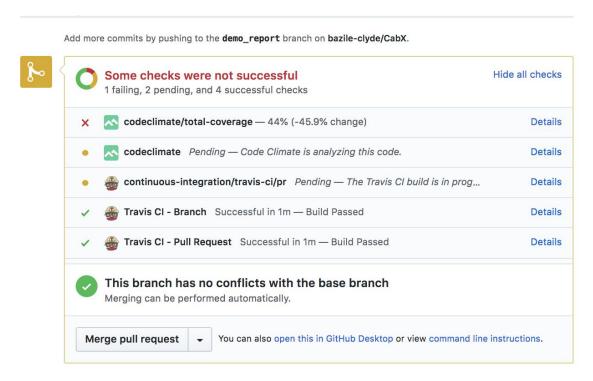
4. Travis CI adds the reports to the repository and pushes it into the branch coverage_reports see ./push.sh script (https://github.com/bazile-clyde/CabX/tree/coverage_reports/reports)



For every build there is a separate folder with all reports.

- a. Travis CI stores unit test, eslint (style checker) and code coverage output to 3 separate text files (report_unittest.txt, report_enslint.txt, report_coverage.txt)
- b. Travis CI creates a new folder in reports/ with the current build number
- c. Travis CI commits and pushes the reports to the branch coverage_reports
- 5. If unit tests were successful, Travis CI sends status codes to GitHub
- 6. Travis CI sends test coverage report to Code Climate
- 7. If test coverage is sufficient (above the threshold) and test coverage decrease (difference) is small, Code Climate sends status codes to GitHub

If both status codes sent by Travis CI and Code Climate are OK, then the PR can be merged. If the status codes are not OK, then the PR is blocked and cannot be merged with the master Example:



Travis CI reported that the unit test successfully ran.

Code climate reported that the code coverage is 44% and below the threshold. Therefore, the PR could not be merged with the master. (In the screenshot, I can merge as an administrator)

3.2 Examples during demo

In our presentation, we demonstrated the following parts:

- 1) Explanation of overall workflow
- 2) Showing and explaining our configuration for pre-commit and post-commit
- 3) Demonstrated an example of a successful pre commit
- 4) Demonstrated an example of an unsuccessful pre-commit unit test failed (no changes were committed)
- 5) Demonstrated an example of a successful push successful Travis CI build and code coverage reports in GitHub repository
- (https://github.com/bazile-clyde/CabX/tree/coverage_reports/reports)
- 6) Demonstrated an example of an unsuccessful push low code coverage. We showed the status codes in GitHub and that the PR could not be merged with the master

4. A link to the github repository where your entire codebase resides. Tag the revisions that were shown in the demo.

https://github.com/bazile-clyde/CabX

Reports:

https://github.com/bazile-clyde/CabX/tree/coverage_reports/reports

Appendix:

Commit output

```
dyn-160-39-161-130:CabX bennys$ git commit
 getFindRides.js
    findRides() error for from address

√ 500 response code from bing

    findRides() cannot find from address

✓ empty response from bing

    findRides() error for to address
500
      ✓ 500 response code from bing
   findRides() cannot find to address

✓ empty response to bing

    findRides() - standard sucess
[ { name: 'Empire State Building, NY',
    confidence: 'High',
    lat: 40.74843597412<u>11</u>,
   long: -73.9858093261719,
    address:
    { adminDistrict: 'NY',
       countryRegion: 'United States',
       formattedAddress: 'Empire State Building, NY',
       locality: 'New York' } } ]
[ { ride_hailing_service: 'uber',
    display_name: 'Black SUV',
    estimated_duration_seconds: 1920,
    estimated_distance_miles: 6.88,
    estimated_cost_cents_min: 61,
    estimated_cost_cents_max: 76 },
  { ride hailing service: 'uber',
    display_name: 'Black SUV 2',
    estimated_duration_seconds: 2000,
    estimated_distance_miles: 10,
    estimated cost cents min: 70,
    estimated_cost_cents_max: 80 },
 { ride_hailing_service: 'lyft',
    display_name: 'Lyft Service',
    estimated duration seconds: 1920,
```

```
estimated distance miles: 6.88,
    estimated_cost_cents_min: 61,
    estimated_cost_cents_max: 76 },
  { ride_hailing_service: 'lyft',
    display_name: 'Lyft Service 2'
    estimated_duration_seconds: 2000,
    estimated_distance_miles: 10,
    estimated_cost_cents_min: 80,
    estimated cost cents max: 100 } ]

✓ find lyft and uber

  getLatLongFromAddress.js
    requestLatLongFromAddress() success

√ 200 response code

    requestLatLongFromAddress() error

√ 500 response code

    getRelevantInformationFromLatLongResponse()

✓ success

{ confidence: 'High',
 geocodePoints: [ { coordinates: [Array] } ],
 address:
  { adminDistrict: 'NY',
    countryRegion: 'United States',
     formattedAddress: 'Empire State Building, NY',
    locality: 'New York' } }
does not include all required fields

✓ missing name
{ name: 'Empire State Building',
 geocodePoints: [ { coordinates: [Array] } ],
 address:
  { adminDistrict: 'NY',
    countryRegion: 'United States',
     formattedAddress: 'Empire State Building, NY',
     locality: 'New York' } }
does not include all required fields

✓ missing confidence
{ name: 'Empire State Building',
 confidence: 'High',
 address:
  { adminDistrict: 'NY',
     countryRegion: 'United States',
     formattedAddress: 'Empire State Building, NY',
     locality: 'New York' } }
does not include all required fields

✓ missing geocodePoints
{ name: 'Empire State Building',
 confidence: 'High',
 geocodePoints: [ { coordinates: [Array] } ] }
does not include all required fields

√ missing address
{ name: 'Empire State Building',
 confidence: 'High',
 geocodePoints: [ {} ],
 address:
  { adminDistrict: 'NY',
     countryRegion: 'United States',
```

```
formattedAddress: 'Empire State Building, NY',
    locality: 'New York' } }
does not include all required fields

✓ missing coordinates
{ name: 'Empire State Building',
 confidence: 'High',
 geocodePoints: [ { coordinates: [Array] } ],
  { adminDistrict: 'NY',
     countryRegion: 'United States',
     formattedAddress: 'Empire State Building, NY',
     locality: 'New York' } }
does not include all required fields
      ✓ only one coordinate
   processBingResponseBody()

✓ success standard case

✓ success empty input

{ confidence: 'High 1',
  geocodePoints: [ { coordinates: [Array] } ],
  address:
  { adminDistrict: 'NY 1',
    countryRegion: 'United States 1',
     formattedAddress: 'Empire State Building, NY 1',
    locality: 'New York 1' } }
does not include all required fields
      ✓ error one wrong, one correct
{ confidence: 'High 1',
 geocodePoints: [ { coordinates: [Array] } ],
 address:
  { adminDistrict: 'NY 1',
    countryRegion: 'United States 1',
    formattedAddress: 'Empire State Building, NY 1',
    locality: 'New York 1' } }
does not include all required fields
{ name: 'Empire State Building 2',
 confidence: 'High 2',
 address:
  { adminDistrict: 'NY 2',
     countryRegion: 'United States 2',
    formattedAddress: 'Empire State Building, NY 2',
    locality: 'New York 2' } }
does not include all required fields
      ✓ error two wrong
   processBingLatLongResponse()

✓ success standard case

{ authenticationResultCode: 'ValidCredentials',
 brandLogoUri: 'http://dev.virtualearth.net/Branding/logo_powered_by.png',
 copyright: 'Copyright (c) 2018',
  statusCode: 200,
 statusDescription: 'OK',
 traceId: 'traceId' }
does not include all required fields
      ✓ error missing resourceSets
{ authenticationResultCode: 'ValidCredentials',
 brandLogoUri: 'http://dev.virtualearth.net/Branding/logo_powered_by.png',
  copyright: 'Copyright (c) 2018',
```

```
resourceSets: [ { estimatedTotal: 2 } ],
  statusCode: 200,
  statusDescription: 'OK',
  traceId: 'traceId' }
does not include all required fields

✓ error missing resources

 getLyft.js
    getRelevantInformationFromLyftResponse()

✓ success - standard case

{ estimated_distance_miles: 6.88,
  estimated cost cents max: 7600,
 estimated_cost_cents_min: 6100,
 estimated_duration_seconds: 1920 }
does not include all required fields

✓ error - missing display name

{ display_name: 'Lyft Service',
 estimated_cost_cents_max: 7600,
  estimated_cost_cents_min: 6100,
 estimated duration seconds: 1920 }
does not include all required fields
      ✓ error - missing estimated_distance_miles
{ display_name: 'Lyft Service',
 estimated_distance_miles: 6.88,
 estimated_cost_cents_min: 6100,
 estimated_duration_seconds: 1920 }
does not include all required fields
      ✓ error - missing estimated_cost_cents_max
{ display_name: 'Lyft Service',
 estimated_distance_miles: 6.88,
 estimated cost cents max: 7600,
 estimated duration seconds: 1920 }
does not include all required fields
      ✓ error - missing estimated_cost_cents_min
{ display name: 'Lyft Service',
 estimated_distance_miles: 6.88,
 estimated_cost_cents_max: 7600,
 estimated_cost_cents_min: 6100 }
does not include all required fields
      ✓ error - missing estimated_duration_seconds
    processLyftResponseBody()

✓ success - standard case

✓ success empty input

{ display_name: 'Lyft Service',
 estimated_distance_miles: 6.88,
 estimated_cost_cents_max: 7600,
 estimated_cost_cents_min: 6100 }
does not include all required fields
      ✓ error one wrong, one correct
{ display_name: 'Lyft Service',
 estimated_distance_miles: 6.88,
 estimated_cost_cents_max: 7600,
 estimated_cost_cents_min: 6100 }
does not include all required fields
{ display name: 'Lyft Service 2',
  estimated_distance_miles: 10,
```

```
estimated_cost_cents_min: 8000,
 estimated_duration_seconds: 2000 }
does not include all required fields
      ✓ error two wrong
   lyftPrices() success
      ✓ 200 response code
    lyftPrices() error
      ✓ 500 response code
 getUber.js
    getRelevantInformationFromUberResponse()

✓ success - standard case

{ distance: 6.88,
 high_estimate: 76,
 low_estimate: 61,
 duration: 1920 }
does not include all required fields

✓ error - missing display_name

{ display_name: 'Black SUV',
 high_estimate: 76,
 low_estimate: 61,
 duration: 1920 }
does not include all required fields

✓ error - missing distance
{ display_name: 'Black SUV',
 distance: 6.88,
 low_estimate: 61,
 duration: 1920 }
does not include all required fields

✓ error - missing high_estimate

{ display name: 'Black SUV',
 distance: 6.88,
 high_estimate: 76,
 duration: 1920 }
does not include all required fields
      ✓ error - missing low_estimate
{ display_name: 'Black SUV',
 distance: 6.88,
 high estimate: 76,
 low_estimate: 61 }
does not include all required fields

✓ error - missing duration
    processUberResponseBody()

✓ success - standard case

✓ success empty input

{ distance: 6.88,
 high_estimate: 76,
 low_estimate: 61,
 duration: 1920 }
does not include all required fields
      ✓ error one wrong, one correct
{ distance: 6.88,
 high_estimate: 76,
 low estimate: 61,
 duration: 1920 }
does not include all required fields
```

```
{ display_name: 'Black SUV 2',
 high_estimate: 80,
 low_estimate: 70,
  duration: 2000 }
does not include all required fields
      ✓ error two wrong
   uberPrices() success

√ 200 response code

   uberPrices() error
      ✓ 500 response code
 Array

✓ should return -1 when the value is not present
 Array

✓ should return -1 when the value is not present
 47 passing (66ms)
 Array

✓ should return -1 when the value is not present
 getFindRides.js
    findRides() error for from address
500

√ 500 response code from bing

    findRides() cannot find from address

✓ empty response from bing

    findRides() error for to address
500

√ 500 response code from bing

    findRides() cannot find to address

✓ empty response to bing

    findRides() - standard sucess
[ { name: 'Empire State Building, NY',
    confidence: 'High',
    lat: 40.7484359741211,
   long: -73.9858093261719,
    address:
    { adminDistrict: 'NY',
       countryRegion: 'United States',
       formattedAddress: 'Empire State Building, NY',
       locality: 'New York' } } ]
[ { ride_hailing_service: 'uber',
    display_name: 'Black SUV',
    estimated_duration_seconds: 1920,
    estimated_distance_miles: 6.88,
    estimated cost cents min: 61,
    estimated_cost_cents_max: 76 },
  { ride_hailing_service: 'uber',
```

```
display name: 'Black SUV 2',
    estimated_duration_seconds: 2000,
    estimated_distance_miles: 10,
    estimated_cost_cents_min: 70,
    estimated_cost_cents_max: 80 },
  { ride_hailing_service: 'lyft',
    display_name: 'Lyft Service',
    estimated_duration_seconds: 1920,
    estimated distance miles: 6.88,
    estimated_cost_cents_min: 61,
    estimated_cost_cents_max: 76 },
  { ride_hailing_service: 'lyft',
    display_name: 'Lyft Service 2'
    estimated_duration_seconds: 2000,
    estimated_distance_miles: 10,
    estimated cost cents min: 80,
    estimated_cost_cents_max: 100 } ]

✓ find lyft and uber

  getLatLongFromAddress.js
    requestLatLongFromAddress() success

√ 200 response code

    requestLatLongFromAddress() error

√ 500 response code

    getRelevantInformationFromLatLongResponse()

√ success

{ confidence: 'High',
  geocodePoints: [ { coordinates: [Array] } ],
 address:
  { adminDistrict: 'NY',
     countryRegion: 'United States',
     formattedAddress: 'Empire State Building, NY',
    locality: 'New York' } }
does not include all required fields

√ missing name

{ name: 'Empire State Building',
 geocodePoints: [ { coordinates: [Array] } ],
 address:
  { adminDistrict: 'NY',
    countryRegion: 'United States',
     formattedAddress: 'Empire State Building, NY',
     locality: 'New York' } }
does not include all required fields

✓ missing confidence
{ name: 'Empire State Building',
 confidence: 'High',
 address:
  { adminDistrict: 'NY',
     countryRegion: 'United States',
     formattedAddress: 'Empire State Building, NY',
    locality: 'New York' } }
does not include all required fields

✓ missing geocodePoints

{ name: 'Empire State Building',
 confidence: 'High',
  geocodePoints: [ { coordinates: [Array] } ] }
```

```
does not include all required fields

✓ missing address
{ name: 'Empire State Building',
  confidence: 'High',
 geocodePoints: [ {} ],
 address:
  { adminDistrict: 'NY',
    countryRegion: 'United States',
    formattedAddress: 'Empire State Building, NY',
    locality: 'New York' } }
does not include all required fields

✓ missing coordinates
{ name: 'Empire State Building',
 confidence: 'High',
 geocodePoints: [ { coordinates: [Array] } ],
 address:
  { adminDistrict: 'NY',
    countryRegion: 'United States',
     formattedAddress: 'Empire State Building, NY',
     locality: 'New York' } }
does not include all required fields

✓ only one coordinate

    processBingResponseBody()

✓ success standard case

✓ success empty input

{ confidence: 'High 1',
  geocodePoints: [ { coordinates: [Array] } ],
 address:
  { adminDistrict: 'NY 1',
    countryRegion: 'United States 1',
    formattedAddress: 'Empire State Building, NY 1',
    locality: 'New York 1' } }
does not include all required fields
      ✓ error one wrong, one correct
{ confidence: 'High 1',
 geocodePoints: [ { coordinates: [Array] } ],
 address:
  { adminDistrict: 'NY 1',
    countryRegion: 'United States 1',
    formattedAddress: 'Empire State Building, NY 1',
    locality: 'New York 1' } }
does not include all required fields
{ name: 'Empire State Building 2',
 confidence: 'High 2',
 address:
  { adminDistrict: 'NY 2',
    countryRegion: 'United States 2',
    formattedAddress: 'Empire State Building, NY 2',
    locality: 'New York 2' } }
does not include all required fields

✓ error two wrong

    processBingLatLongResponse()

✓ success standard case

{ authenticationResultCode: 'ValidCredentials',
 brandLogoUri: 'http://dev.virtualearth.net/Branding/logo_powered_by.png',
  copyright: 'Copyright (c) 2018',
```

```
statusCode: 200,
 statusDescription: 'OK',
  traceId: 'traceId' }
does not include all required fields

✓ error missing resourceSets

{ authenticationResultCode: 'ValidCredentials',
 brandLogoUri: 'http://dev.virtualearth.net/Branding/logo_powered_by.png',
  copyright: 'Copyright (c) 2018',
 resourceSets: [ { estimatedTotal: 2 } ],
 statusCode: 200,
  statusDescription: 'OK',
 traceId: 'traceId' }
does not include all required fields

✓ error missing resources

 getLyft.js
    getRelevantInformationFromLyftResponse()

✓ success - standard case

{ estimated_distance_miles: 6.88,
 estimated cost cents max: 7600,
 estimated_cost_cents_min: 6100,
 estimated_duration_seconds: 1920 }
does not include all required fields

✓ error - missing display_name

{ display_name: 'Lyft Service',
 estimated_cost_cents_max: 7600,
  estimated_cost_cents_min: 6100,
 estimated_duration_seconds: 1920 }
does not include all required fields
      ✓ error - missing estimated_distance_miles
{ display name: 'Lyft Service',
 estimated distance miles: 6.88,
 estimated_cost_cents_min: 6100,
  estimated_duration_seconds: 1920 }
does not include all required fields
      ✓ error - missing estimated_cost_cents_max
{ display_name: 'Lyft Service',
 estimated_distance_miles: 6.88,
 estimated cost cents max: 7600,
 estimated_duration_seconds: 1920 }
does not include all required fields
      ✓ error - missing estimated_cost_cents_min
{ display_name: 'Lyft Service',
 estimated_distance_miles: 6.88,
 estimated_cost_cents_max: 7600,
 estimated_cost_cents_min: 6100 }
does not include all required fields
      ✓ error - missing estimated_duration_seconds
    processLyftResponseBody()

✓ success - standard case

✓ success empty input

{ display_name: 'Lyft Service',
 estimated distance miles: 6.88,
 estimated cost cents max: 7600,
 estimated_cost_cents_min: 6100 }
does not include all required fields
```

```
✓ error one wrong, one correct
{ display_name: 'Lyft Service',
  estimated_distance_miles: 6.88,
  estimated_cost_cents_max: 7600,
  estimated_cost_cents_min: 6100 }
does not include all required fields
{ display_name: 'Lyft Service 2',
  estimated_distance_miles: 10,
  estimated_cost_cents_min: 8000,
  estimated_duration_seconds: 2000 }
does not include all required fields
      ✓ error two wrong
    lyftPrices() success

√ 200 response code

    lyftPrices() error
      ✓ 500 response code
  getUber.js
    getRelevantInformationFromUberResponse()

✓ success - standard case

{ distance: 6.88,
  high_estimate: 76,
  low_estimate: 61,
  duration: 1920 }
does not include all required fields

✓ error - missing display_name

{ display_name: 'Black SUV',
  high_estimate: 76,
  low_estimate: 61,
 duration: 1920 }
does not include all required fields

✓ error - missing distance
{ display_name: 'Black SUV',
  distance: 6.88,
  low estimate: 61,
  duration: 1920 }
does not include all required fields

✓ error - missing high_estimate

{ display name: 'Black SUV',
  distance: 6.88,
  high_estimate: 76,
  duration: 1920 }
does not include all required fields

✓ error - missing low_estimate
{ display_name: 'Black SUV',
  distance: 6.88,
  high_estimate: 76,
  low_estimate: 61 }
does not include all required fields

✓ error - missing duration
    processUberResponseBody()

✓ success - standard case

✓ success empty input

{ distance: 6.88,
  high estimate: 76,
  low_estimate: 61,
```

```
duration: 1920 }
does not include all required fields
     \checkmark error one wrong, one correct
{ distance: 6.88,
 high_estimate: 76,
 low_estimate: 61,
 duration: 1920 }
does not include all required fields
{ display_name: 'Black SUV 2',
  high_estimate: 80,
  low_estimate: 70,
  duration: 2000 }
does not include all required fields
     ✓ error two wrong
   uberPrices() success

√ 200 response code

   uberPrices() error
     ✓ 500 response code
 Array
     \checkmark should return -1 when the value is not present
 47 passing (71ms)
Statements : 90.45% ( 142/157 )
Branches : 83.82% ( 57/68 )
Functions : 91.3% ( 21/23 )
          : 90.45% ( 142/157 )
Aborting commit due to empty commit message.
dyn-160-39-161-130:CabX bennys$ git commit
```