

Laravel Backend Coding Simulation

Trax Milage Tracking Application

Overview

In this coding simulation you are being asked to develop the backend for 'Trax' - a milage tracking application developed using Laravel, Vue.js and Vuetify.js.

The front-end of the application has already been developed and consists of the following features:

- User registration and authentication (Note: No back-end work is required for user management. This work is already complete.)
- Ability for a logged in user to add a car to Trax
- Ability for a logged in user to remove a car from Trax
- Ability for a logged in user to view a list of all their cars
- Ability for a logged in user to add a trip to Trax specifying which car was used.
- Ability for a logged in user to view a list of all their trips

The frontend of the application currently makes requests to a set of mock endpoints implemented in-line in `/routes/api.php`, with each mock endpoint sending back statically defined JSON objects. It is your task to develop a functional API for Trax.

You are being ask to:

- Design the Data-Model for Trax and create corresponding Database Migrations.
- Implement the Eloquent Model Layer
- Design a RESTful API to be consumed by the front-end using the mock end-points as a guide for the expected data format.
- Implement the Controller(s) for the API and leverage them in the routes.
- Update the frontend's `/resources/assets/js/traxAPI.js` file so that the frontend makes uses of your new API.

Ideally, you should showcase your Laravel experience by using as many Laravel specific features as possible. For example: Scopes, Resources, Policies, Unit Tests, etc.

Getting Started

Perform the following steps to get started with the coding simulation.

- Clone the Trax git repo

```
> git clone git@bitbucket.org:shiftkeyllc/trax.git
```

- Create a branch which will contain your work

```
> cd trax
> git branch <your-last-name>
> git checkout <your-last-name>
> git push --set-upstream origin <your-last-name>
```

- Setup the Laravel .env file

```
> cp .env.example .env
```

- Modify .env database variables if necessary, by default they are:

```
DB_CONNECTION=mysql
DB_HOST=127.0.0.1
DB_PORT=3306
DB_DATABASE=trax
DB_USERNAME=root
DB_PASSWORD=secret
```

- Install PHP dependencies

```
> composer install
```

- Install node dependencies

```
> npm install
```

- Compile .js and .scss files to the public folder. (Note: this has to be re-ran if any frontend changes are made, including changes to the traxAPI.js file)

```
> npm run dev
```

- Create the trax database

```
> mysql -u root -psecret
mysql> CREATE DATABASE IF NOT EXISTS trax;
mysql> exit
```

- Run migrations

```
> php artisan migrate
```

Setup valet

```
> cd <root repo directory>  
> valet park
```

At this point you can open <http://trax.test> and start using the mock-API backed application. As a first step, you should click 'Register' in the upper right to create an account and enter the application.

Good Luck!