Final Assignment #19

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We will use the results of this assignment for a formal and final evaluation and as such you should write the code individually. Plagiarism is a violation of the Academy contract and makes nobody happy.

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Intro

We all want to be millionaires, right? This is your chance to join the 3 Comma Club with this amazing business idea: Uber for tickets.

It doesn't exist yet and will make us millions, we just have to build it right now!

> "Greed is good" - Gordon Gekko

We want customers to offer tickets to events in Amsterdam and when you buy them, we automatically dispatch a car to pick you up to the event.

Description

The app should have a login and signup page for customers. You need to login to create events, tickets and comments.

Events have:

- a name
- a description
- a picture or logo
- a start and end date (could be the same)

After you click on an event, you see a list of tickets that are offered for this event.
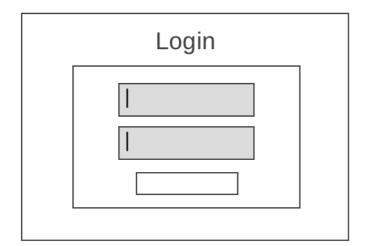
A ticket is made for a specific event and has an author (the user that created the ticket). Apart from that, it has:
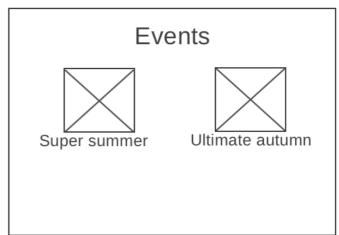
- a picture of the ticket (optional field)
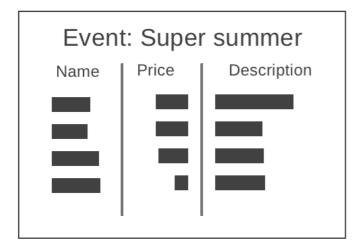- a price
- a description

When you click on a ticket, you see the details of that ticket (description/price) and which event it's for. On this page you can add comments as a customer, and everybody can see all the comments.

A comment has a text and is connected to a specific ticket. It also has an author.

Anybody can view events and tickets, but you have to login to add a new ticket or comment.

Login

Events

Super summer   Ultimate autumn

Event: Super summer

Name	Price	Description

Ticket from Paul
Risk: X%

EUR 200

Comments

Nora

Mad dog

!! Fraud risk algorithm !!

This is an important part of the assignment. If you only finish one thing, it should be this thing!

Tickets can be fraudulent, and as a customer I don't want to buy a fake ticket! Because of that we want to show to customers the risk that they are taking when buying the ticket.

On the ticket page for a specific ticket, we want to show a text like:

> "We calculated that the risk of this ticket being a fraud is XX%"

The percentage should be calculated using the following algorithm:

- if the ticket is the only ticket of the author, add 4%
- if the ticket price is lower than the average ticket price for that event, that's a risk
    - if a ticket is X% cheaper than the average price, add X% to the risk
    - if a ticket is X% more expensive than the average price, deduct X% from the risk, with a maximum of 15% deduction

- if the ticket was added during business hours (9-17), deduct 13% from the risk, if not, add 13% to the risk
- if there are >3 comments on the ticket, add 6% to the risk

The minimal risk is 2% (there's no such thing as no risk) and the maximum risk is 98%.

User stories

- As a customer I want to see max. 4 events on a page and be able to click 'next' to see more pages of events if there are more
- As a customer I only want to see events that are not finished yet
- As a customer I want to view a list of tickets when I click on an event
- As a customer I want to view ticket details when I click on a ticket in the ticket list
- As a customer I want to see what the fraud-risk is for a specific ticket
- As a customer I want to be able to login, or sign up if I don't have an account yet
- As a logged in customer I want to add a ticket (for a specific event) that shows up on the event page with a title, picture, price and description\
- As an author of the ticket I want to be able to edit a ticket's description, price and picture (other logged in customers cannot do this! only authors and admins)
- As a logged in customer I want to be able to create events with a name, picture (logo), date and description
- As a customer I can see some color (red/yellow/green) indicating the fraud risk of a ticket for all tickets in the all tickets list

Bonus stories

- Only admins should be able to create, edit and delete events
- As an admin I should be able to delete any comment and edit/delete any ticket
- As a mobile visitor I want to have a joyfull experience (responsive!)
- As a customer I want to be able to filter and search in the list of events
- As a customer I want to be able to sort the list of tickets on author and price
- As a customer I want to install this as an app on my phone
- Use the [Uber API](#) to dispatch an Uber when you buy a ticket

Tools and technology

We recommend to use starter kits that we provided during the program to start this app.

In terms of backend (server) technology, you can work with any NodeJS backend: JavaScript or Typescript, Express, Koa or routing-controllers is up to you. The API should be following the better part of the REST principles.

For the frontend, we expect you to properly use React and Redux. Make sure you use the Redux store to your advantage! Use either create-react-app or one of the starter kits that you've used before.

Feel free to add any packages that you like. E.g. MaterialUI can be used to set up a nice layout (maybe even responsive!) but there are perfect alternatives as well.

Hand-in and evaluation

You will receive a time slot for a final evaluation talk on Friday. **Before** you show up on Friday, you should share the code of your assignment (frontend + backend) with us:

- create a Bitbucket account (it's like Github, but they offer free private repositories)
- create a private repo and push your assignment to it regularly (so even if your computer breaks you will have a backup and we can see your progress!)
- invite teachers@codaisseur.com (username: codaisseur-teachers) to join the repository

We don't want you to publish the code of your final assignment on GitHub during the week to prevent people from copying each others work.

Final words

- Show us what you've learned in the past weeks!
- Have fun
- Don't forget to sleep