

Plan & Travel

Prepared for: She codes Final project

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Why did I choose this topic?

Planing trip is the interesting, important and easy way to be ready for the trip and enjoy from it without wasting time on additional searching.

When I traveled I always wanted to have one application for all the required things. Instead I used different notes applications but it was still difficult to find important things fast.

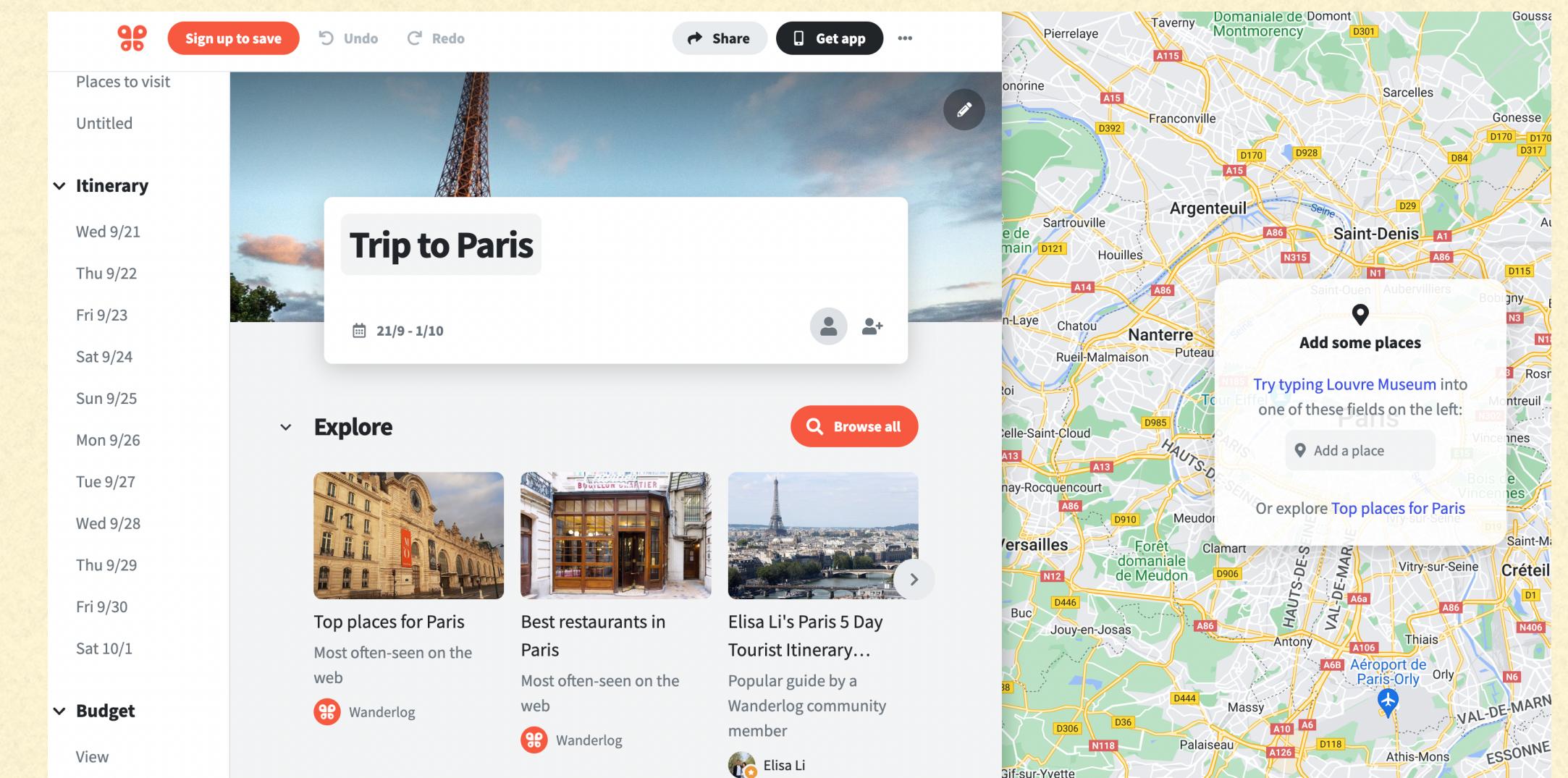
So I wanted to develop an application that includes all important things for me and my users.



Market research

There are some interesting applications in the market like these:

- **Wanderlog**
- **TripliT: Travel Planner**
- **Packing Pro**
- **Inspirock**
- **etc.**



All of them have the different focus points: focus on preparation, flight , places to visit by date and etc.

Some of them has mobile applications for iOS and Android too.

<https://www.travelinglifestyle.net/best-travel-planning-apps/#tripit>

My goals and proposals

Plan&Trip application will help travellers to prepare, plan and document the trip without forgetting important things, and be ready during the whole trip in its each step.

Authenticated user can create multiple trips, view, edit or delete them.

The screenshot shows a travel planning application interface. At the top, there is a header bar with a globe icon, the text "Plan & Travel", and two buttons: "Register" and "Log in". Below the header is a large world map background. In the center, there is a form for travel planning:

- Where would you like to travel?**: A text input field containing "London".
- Approximaly travel period:**: Two date input fields, both set to "22/08/2022", with calendar icons next to them.
- Check the weather for London on holiday-weather.com**: A green link text.
- Please register or login to start your trip!**: A green text message.

At the bottom of the screen, there is a footer bar with the URL <https://github.com/basnaly>, the text "Israel-2022", and a small profile picture of a person.

Trip description

Every trip will include navigation with the next options:

- *Period of trip. Start and end date of the trip. The date can be changed.*
- *Preparations. User can create a new category and add note/s into it.*

For example:

category: “Documents” contains: passport, covid certificate and etc.

The screenshot shows a travel planning application with a top navigation bar featuring a globe icon, the text "Plan & Travel", and buttons for "Save", "Discard", and a user profile icon. Below the navigation is a horizontal menu with tabs: London, Period, Preparations, Transportations, Accommodations, Visitings, Comments, and Expences. The main area features a world map background. A modal window is open under the "Preparations" tab, containing a list of items categorized into "Documents", "Clothes", and "Care". Each item has a checkbox, a note field, and a delete icon. At the bottom of the modal are buttons for "Category" and "Note", and a plus sign icon for adding more items.

<https://github.com/basnaly>

Israel-2022



Trip description

- **Transportations.** User can create a list of transportations that he intends to use for the trip.
- **Accommodation.** User can create stay places like hotel or / and apartment with date, name, price and notes.
- **Visiting.** User can create list of sites to visit that will contain date, link, price and additional notes.
- **Comments.** May contain links and other useful information.
- **Expenses.** User can create expenses list and update it during the trip, create inner categories for types of payment

The screenshot shows a user interface for managing travel expenses. At the top, there's a header with the title "Plan & Travel" and tabs for "London", "Period", "Preparations", "Transportations", "Accommodations", "Visitings", "Comments", and "Expences". On the right side of the header are "Save" and "Discard" buttons and a user profile icon. Below the header is a table listing six transactions:

Transaction date	Product/service	Price	Currency	Payment method	Notes
01/09/2022	Luch	62	£	American Ex...	Museum cafe
02/09/2022	Science Museum	45	£	Mastercard	3 tickets
04/09/2022	Temse Boat trip	160	\$	American Ex...	Trip with dinner
05/09/2022	Tesco	36	£	American Ex...	Some food
07/09/2022	Tower Bridge	48	£	Mastercard	2 tickets + souvenirs

At the bottom left of the table area is a green "Add new expence" button. At the very bottom of the screen, there's a footer bar with the URL "https://github.com/basnaly" and the text "Israel-2022". On the far right of the footer is a small user profile icon.

Work procedure

- 1. Design my application using Figma and prepare design document.*
- 2. Develop UI that work with Google Firebase and authentication.*
- 3. Develop backend authentication using Node JS with Express and Mondo DB.*
- 4. Build user actions flow diagrams.*
- 5. Develop backend to manage trips using Node JS with Express and Mondo DB.*
- 6. Develop UI component tests.*
- 7. Develop additional features.*

How the App works

The Plan&Travel application UI was developed using React and Redux.

I used the Material UI design system as well.

The Redux has 3 reducers:

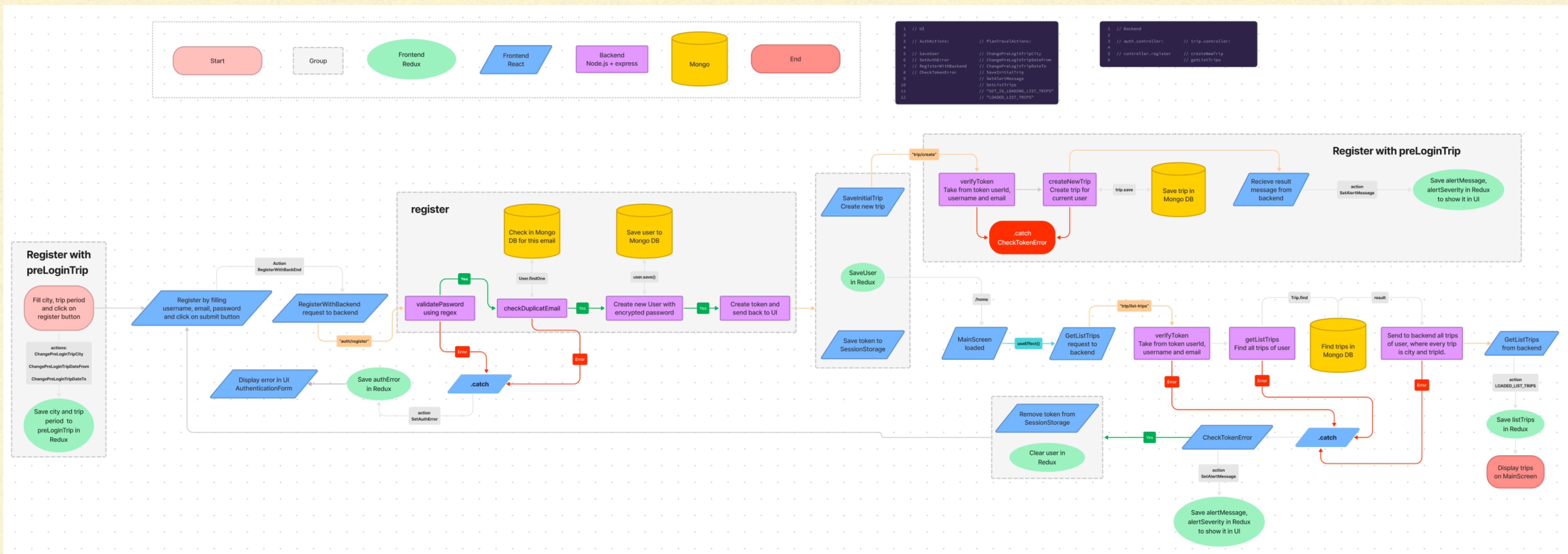
- *AuthenticationReducer - saves user data.*
- *PlanTravelReducer saves user's trip data and related info.*
- *ExpencesReducer filter and calculate user's expenses.*

How the App works. Authentication user.

The authentication has some details:

- *All authentication inputs are components of the Material UI library.*
- *The password must contain lower and upper case letters, numbers and symbols, 8-12 letters, validated by regex in both UI and backend.*
- *Every registered user is saved in Mongo DB with encrypted password.*
- *Backend generates auth token for 48 hours for registered and logged in user.*
- *This token is saved in session storage of browser to use in every request.*

Register flow diagram.



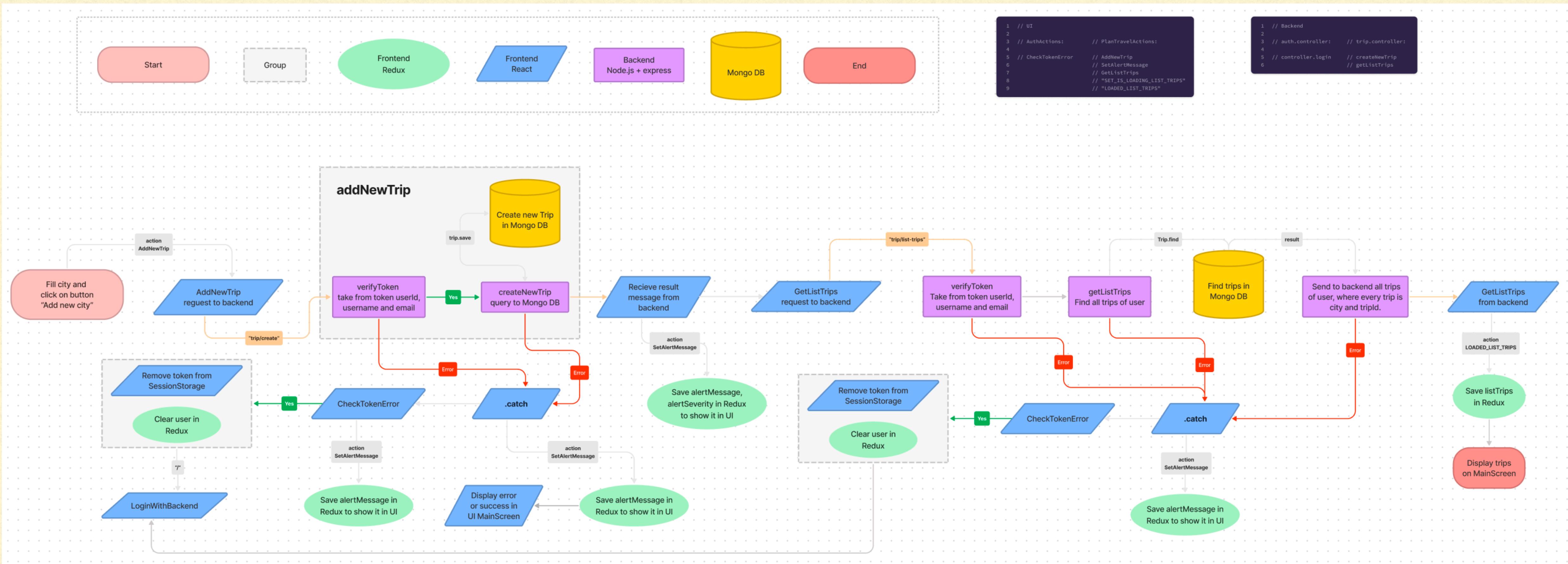
How the App works. Trip data.

All trip inputs are managed using the Formik library, that allows me to save and change the big trip object through tabs. Formik provides nice save and discard functionality. So I don't need to save and manage trip in Redux, which makes the code less complex.

The Plan&Travel application has 2 modes:

- *Edit mode. Here user can create, edit or delete the parameters of his trip, like: period of trip, preparation, accommodation, transportation and etc.*
- *View mode. This allows user to see all the data of his trip, including the map of trip's city, location of ordered hotel, places to visit and etc. Also in view mode user can calculate expenses in different currencies and payment methods.*

Add newTrip flow diagram.

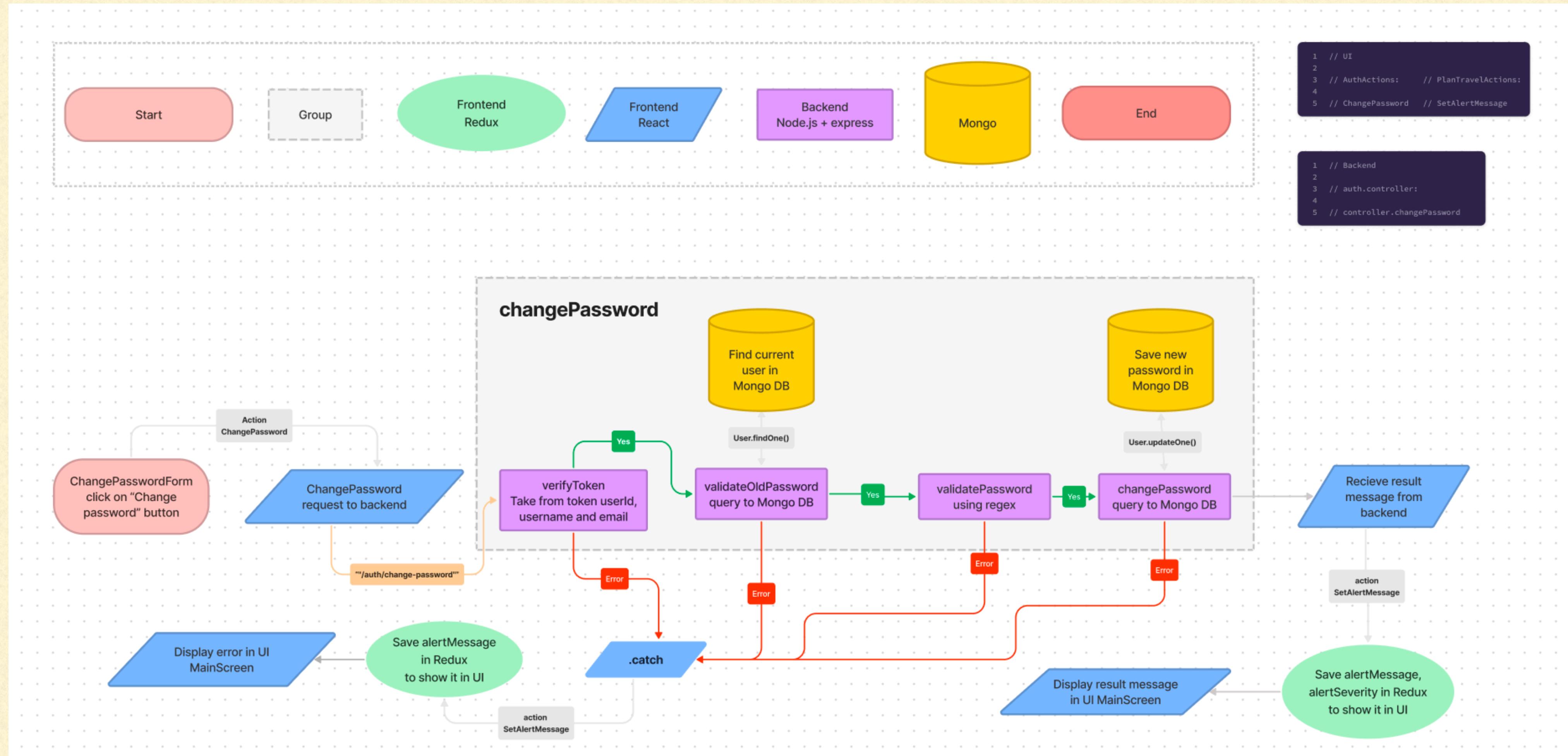


How the App works. Additional features.

The Plan&Travel application has some additional features:

- *User can see the typed password in the field by clicking on “eye “ button.*
- *Sort cities of the trip by ascending and descending order of city’s name.*
- *Flag of trip’s period according to the time: future, current and past.*
- *Filter trip by the time period.*
- *Greeting user according to the type of the day.*
- *Options to change password and delete account.*

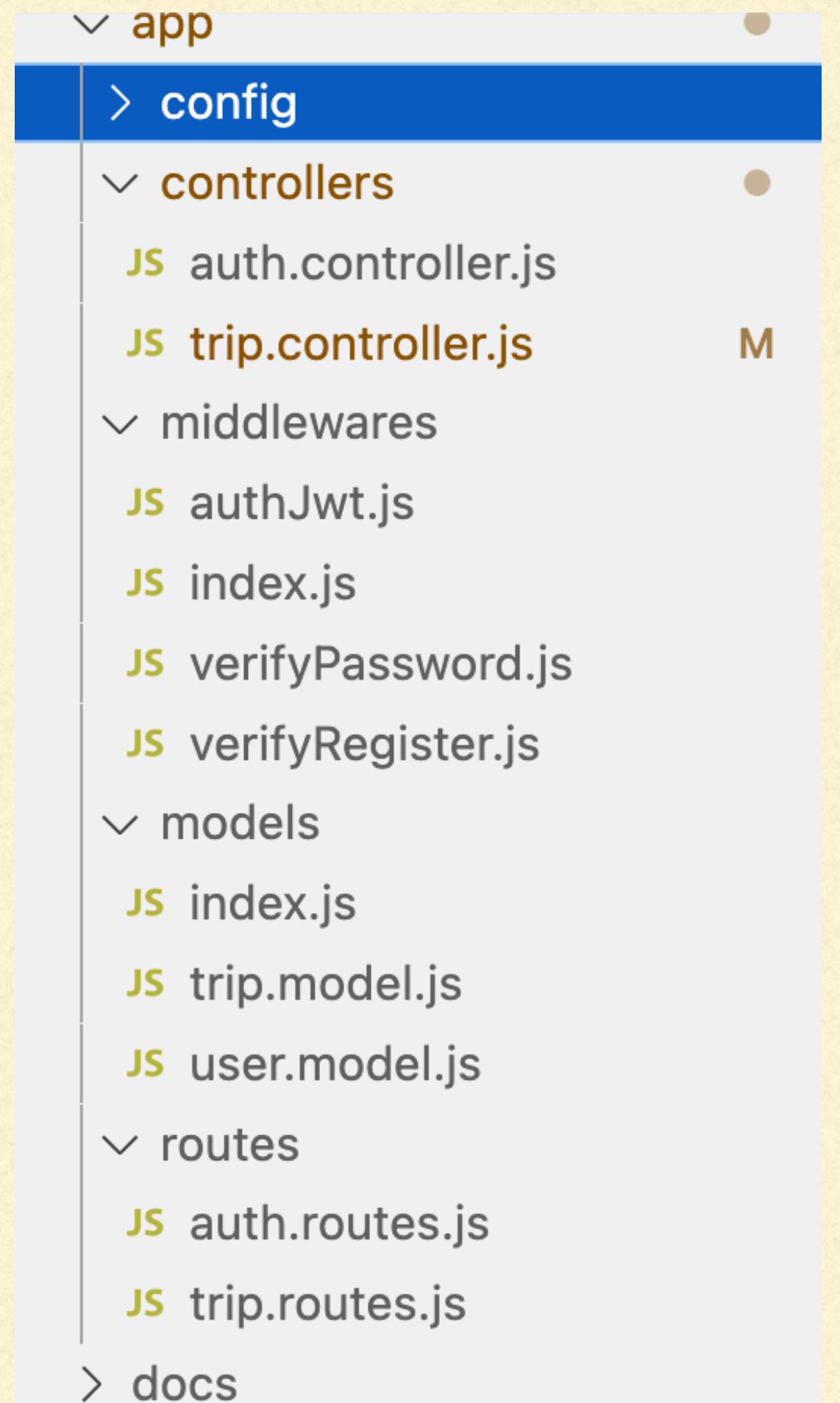
ChangePassword flow diagram.



How the App works. Backend.

The Backend was developed using Node JS with Express and has the following structure:

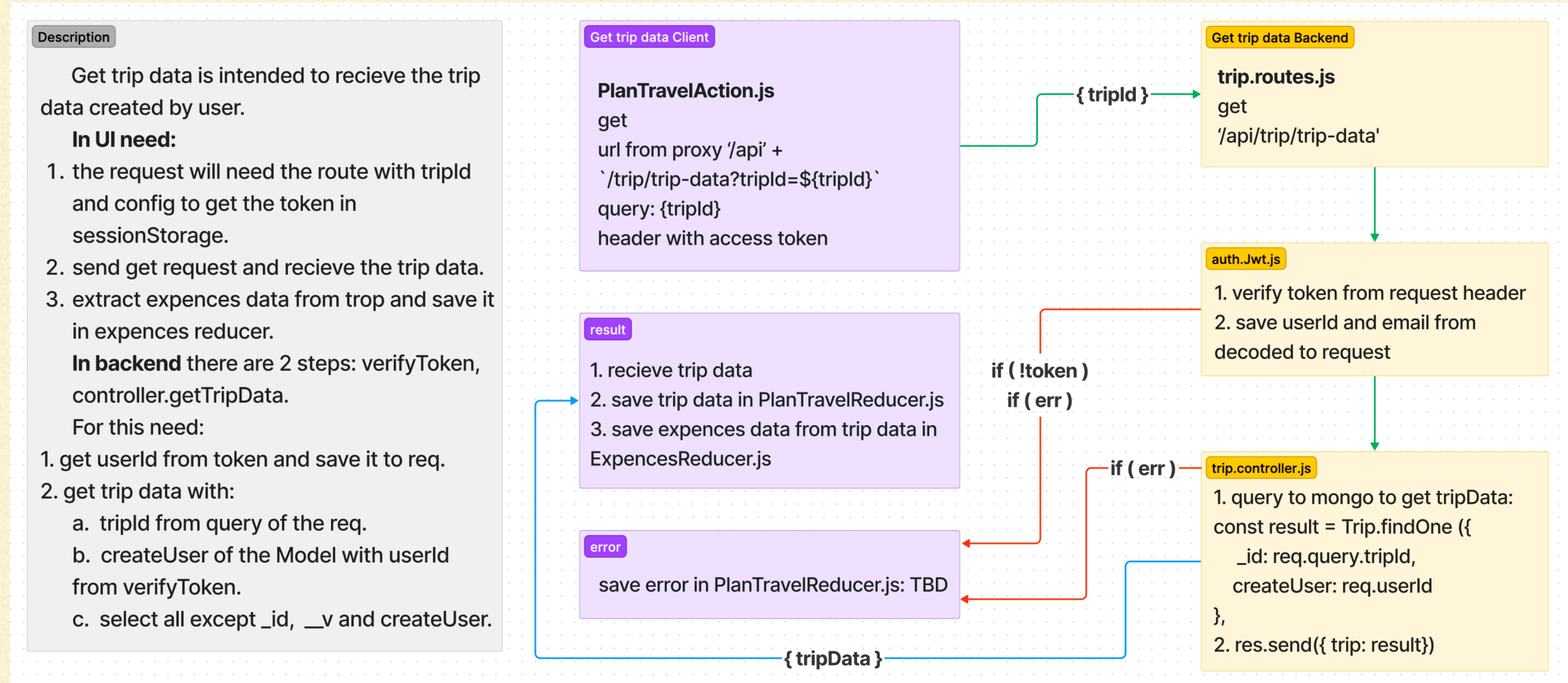
- *Server.js file has all required express configuration.*
- *Routes, controllers and models folders have auth and trip files accordantly.*
- *Files in the middleware folder contain utility functions like: token verification, password validation and etc.*
- *Trip and user files in models folder have mongoose schemas used in Mongo DB.*



How the App works. Backend.

- *Each route in auth routes file contains routes responsible for user management.*
- *Each route in trip routes file contains routes responsible for trip management.*
- *Auth and trip controllers send requests to Mongo DB to get, update or delete the data.*
- *Each trip contains the user id of the owner of this trip.*
- *In each request to change, get or delete of the trip, the backend checks if the requesting user is the owner of this trip*
- *In case of error backend sends the message to UI to display it to user.*

Get Trip Data diagram.



How the App works. Mongo DB.

All Plan&Travel app's data is saved in Mongo DB.

The Mongo DB has 2 collections:

- *User collection, used to save the user data (username, email, encrypted password).*
- *Trip collection, used to save the trip data of each user.*

The UI send request to backend, backend connect to Mongo DB using Mongoose library.

Backend saves the updated data to Mongo DB and returns result to UI.

Resources

Links in Git:

- *UI with firebase:* https://github.com/basnaly/she_codes_app_plan_and_travel
- *UI with backend:* https://github.com/basnaly/she_codes_app_plan_and_travel/tree/with-backend
- *Backend:* https://github.com/basnaly/she_codes_app_plan_and_travel_backend
- *Deployment:* <https://plan-and-travel-app.herokuapp.com/home>
- *Documentation:* https://github.com/basnaly/final_project_she_codes

Questions ?

