

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.

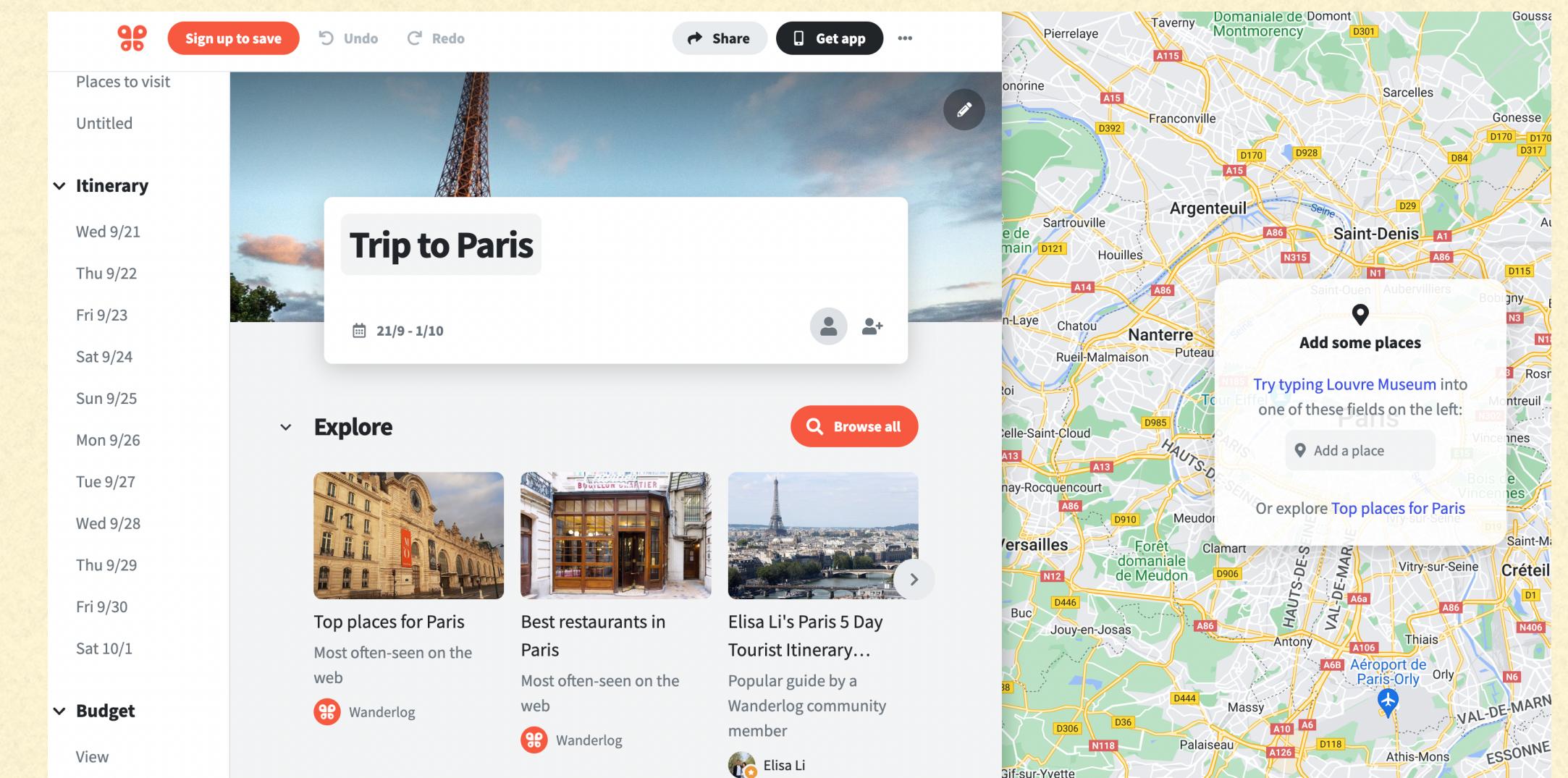
So I wanted to develop an application that includes all important things for me and my users.



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 the homepage of the "Plan & Travel" application. At the top, there is a header bar with the title "Plan & Travel" and icons for "Register" and "Log in". Below the header is a large search form with a world map background. The form asks "Where would you like to travel?" and includes dropdown menus for "Country" and "City". It also features a section for "Approximate travel period:" with date pickers set to "16/09/2022" for both "Date from:" and "Date to:". A "Get weather" button is located below these fields. A message at the bottom of the form says "Please register or login to start your trip!". At the very bottom of the page, there is a footer with links to "https://github.com/basnaly", "Contact us", "Israel-2022", and a small profile icon.

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.*

The travel period:

Date from: 03/09/2022

Date to: 20/09/2022

For example:

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

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.

Plan & Travel

London	Period	Preparations	Transportations	Accommodations	Visitings	Comments	Expences
Transaction date 04/09/2022	Product/service Luch	Price 62	Currency £	Payment method American Ex...	Notes Museum cafe		
Transaction date 04/09/2022	Product/service Science Museum	Price 45	Currency £	Payment method Mastercard	Notes 3 tickets		
Transaction date 06/09/2022	Product/service Temse Boat trip	Price 160	Currency \$	Payment method American Ex...	Notes Trip with dinner		
Transaction date 07/09/2022	Product/service Tesco	Price 36	Currency £	Payment method American Ex...	Notes Some food		
Transaction date 08/09/2022	Product/service Tower Bridge	Price 48	Currency £	Payment method Mastercard	Notes 2 tickets + souvenirs		
Add new expence							

<https://github.com/basnaly> [Contact us](#) Israel-2022 

- **Expenses.** User can create expenses list and update it during the trip, create inner categories for types of payment

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:

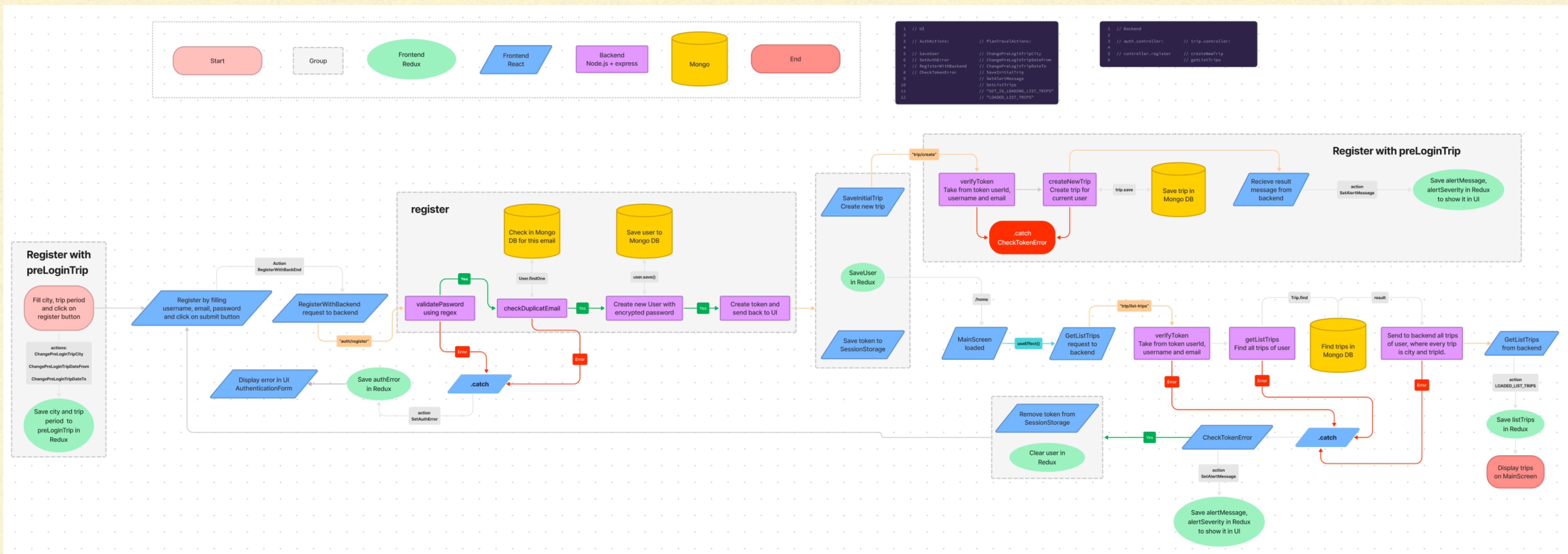
- *AuthenticationReducer - saves user data.*
- *PlanTravelReducer saves user's trip data and related info.*
- *ExpencesReducer filter and calculate user's expenses.*

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:

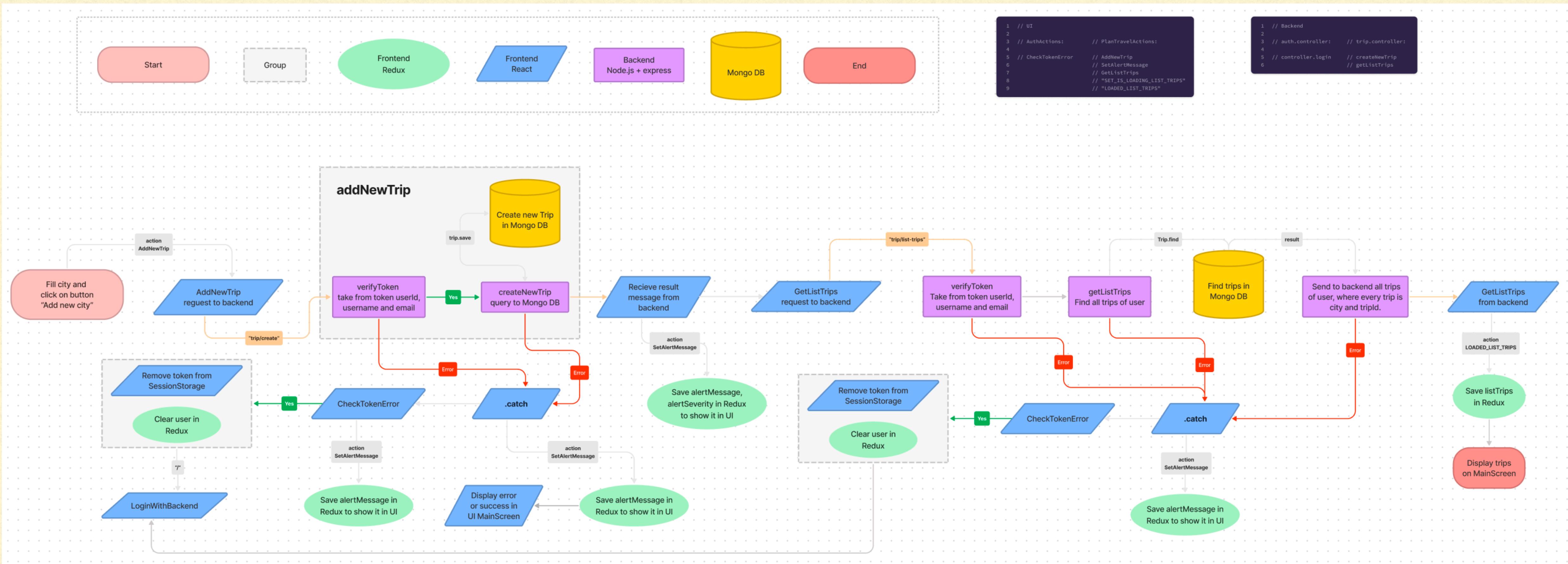
- Edit mode. Here user can create, edit or delete the parameters of his trip, like: period of trip, preparation, accommodation, transportation and etc.

The screenshot shows the 'Plan & Travel' application interface. At the top, there's a header with a globe icon, the title 'Plan & Travel', a 'Filter' button, and a user profile icon. Below the header, there are two dropdown menus: 'Country' and 'City'. A button for 'Add new trip' is also present. The main area features a world map background with four trip cards overlaid:

- Buenos Aires** (Argentina) - Future trip: September 2022. Buttons: View, Edit, Delete.
- Kyoto** (Japan) - Future trip: October 2022. Buttons: View, Edit, Delete.
- London** (UK) - Current trip: September 2022. Buttons: View, Edit, Delete.
- London** (Canada) - Past trip: June 2022. Buttons: View, Edit, Delete.

At the bottom of the screen, there are links for 'https://github.com/basnaly', 'Contact us', and 'Israel-2022', along with a small profile picture of a person.

Add newTrip flow diagram.



How the App works. Trip data.

- **View mode.** This allows user to see all the data of his trip, including the average weather, 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.

The screenshot shows a mobile application interface for travel planning. At the top, there's a header with the title "Plan & Travel" and a "London" location indicator with a British flag. On the left, a sidebar displays a world map with a green box highlighting the UK, and a card for "Buenos Aires, Argentina" with "September" and "View" buttons. The main content area is titled "London" with a "Close" button. It includes sections for "Date of trip:" (from: 03/09/2022 to: 17/09/2022), "The average weather:" (with a table for Sep 11, 2022, Sep 12, 2022, and Sep 13, 2022), and "Preparations:" (with links for "Documents: Passport" and "Covid certificate"). A footer bar at the bottom contains links for "Contact us" and "Israel - 2022".

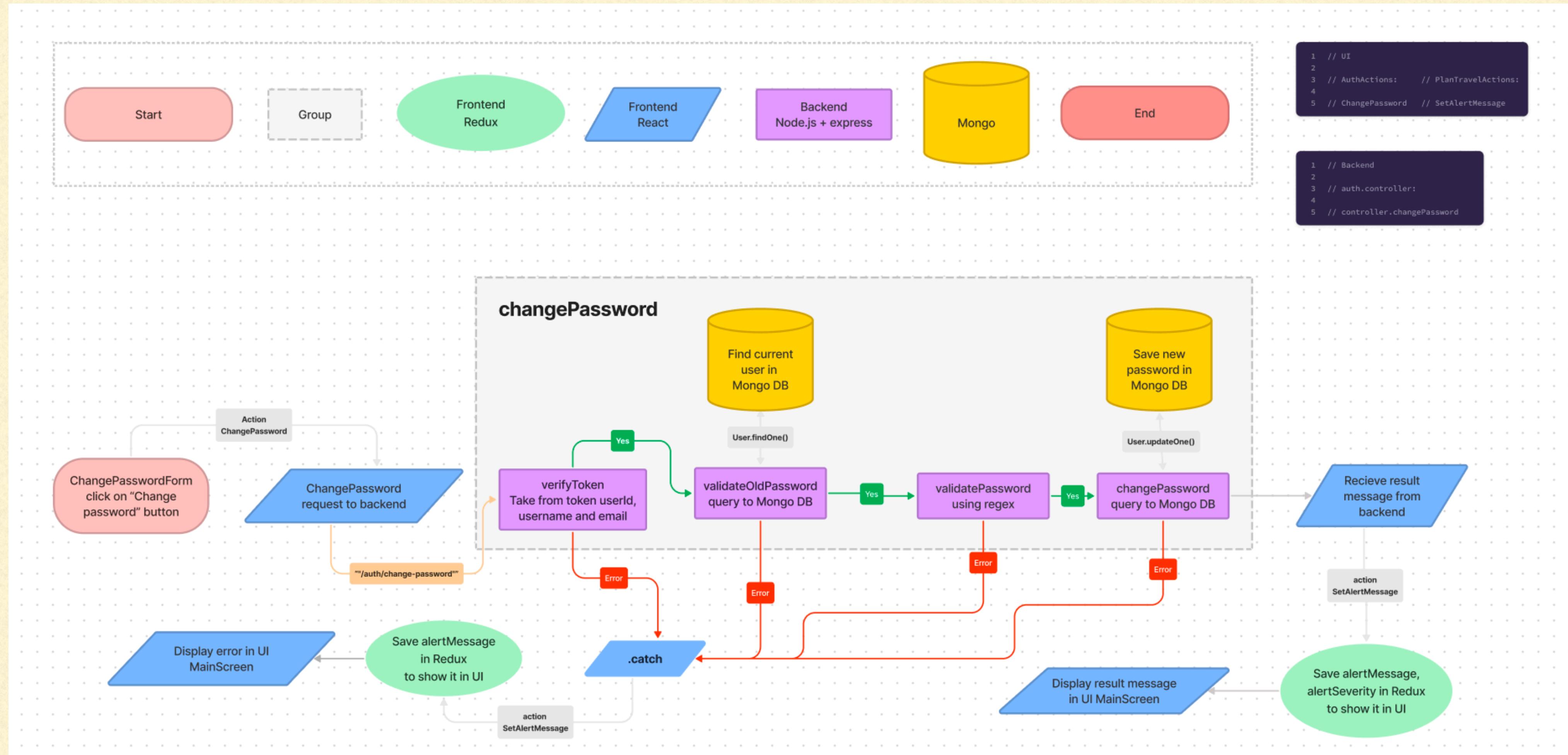
Date	Sep 11, 2022	Sep 12, 2022	Sep 13, 2022
Condition			
Min / Max temperature, °C	13.9 – 22.5	15.7 – 24.5	16.1 – 20.4
Precip, mm / probability, %	0 / 4.8	0.1 / 28.6	3.6 / 28.6
Wind speed, km/h	12.2	10.8	13
Humidity, %	79	73.9	81.4

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.*

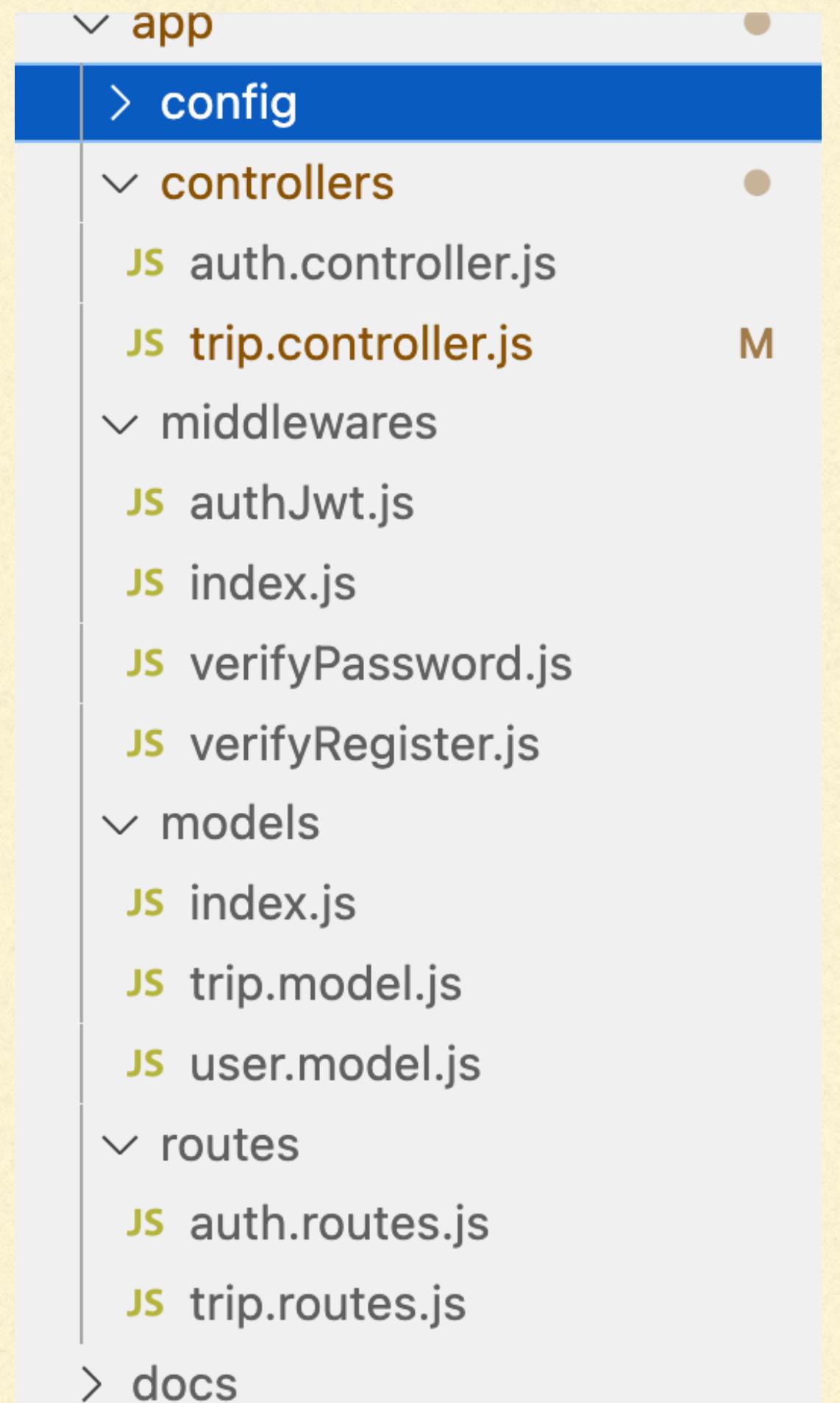
ChangePassword flow diagram.



How the App works. Backend.

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

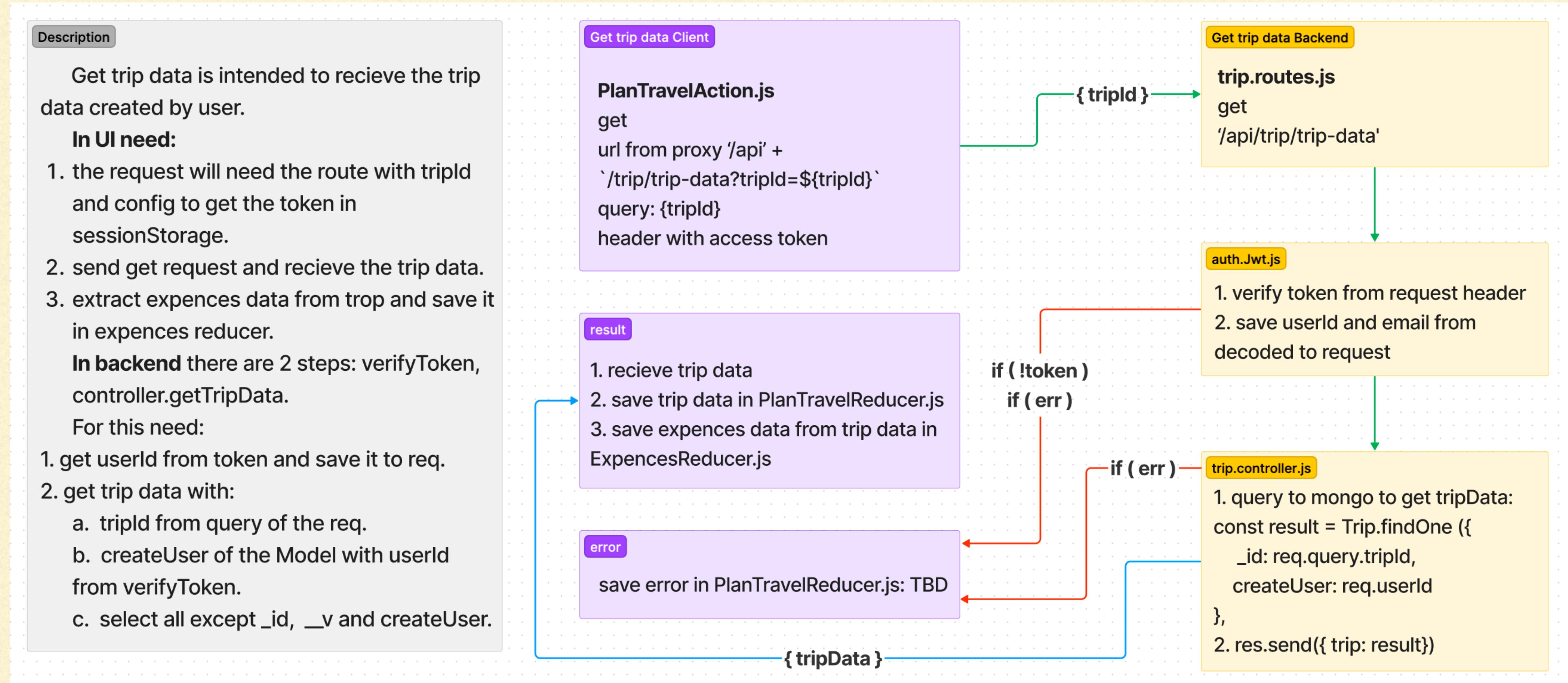
- *Server.js file has all required express configuration.*
- *Routes, controllers and models folders have auth and trip files accordantly.*
- *Files in the middleware folder contain utility functions like: token verification, password validation and etc.*
- *Trip and user files in models folder have 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 3 collections:

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

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:

- *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
- *My email:* basnaly@gmail.com

Questions ?

