Backend

User Guide

Prerequisites
1. Maven must be installed on your computer.

Installing Dependencies
1. Navigate to directory DATABASEAPI that contains the subdirectory SRC.
2. In the command line, run the following command:
    a. *mvn install*

Running Locally
1. Navigate to directory DATABASEAPI that contains the subdirectory SRC.
2. In the command line, run the following command:
    a. *mvn springboot:run*

Packaging into JAR file
1. Navigate to directory DATABASEAPI that contains the subdirectory SRC.
2. In the command line, run the following command:
    a. *mvn clean package springboot:repackage*
3. The newly made JAR file will be under the TARGET subdirectory.

REST API Endpoints Overview

Endpoint	Database Operation	Http Request Type	Query Parameters	Status Code	Response
/appointment	CREATE	POST	appointment_size_name end_date_time location_name tutee_email tutor_email tutee_request_comment start_date_time	200: OK 400: Bad Request 403: Forbidden	N/A
/appointment	READ	GET	appointment_id_equals appointment_size_name_contains cancellation_reason_contains end_date_time_less_than_or_equals is_cancelled_equals is_confirmed_equals location_name_in tutee_email_contains tutor_email_contains start_date_time_greater_than_or_equals page_number number_entries_per_page	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/appointment/update	UPDATE	N/A	end_date_time_old tutee_email_old tutor_email_old start_date_time_old cancellation_reason_new is_cancelled_new is_confirmed_new tutee_request_comment_new	200: OK 400: Bad Request 403: Forbidden 404: Not Found	N/A
/appointment	DELETE	DELETE	appointment_id_equals	200: OK 400: Bad Request 403: Forbidden 404: Not Found	N/A
/appointment_size	READ	GET	appointment_size_name_contains limit offset	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/course	READ	GET	course_number_equals course_number_less_than_or_equals course_number_greater_than_or_equals course_title_contains major_abbreviation_contains limit offset	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/location	READ	GET	location_name_in limit offset	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/major	READ	GET	major_abbreviation_contains major_name_contains limit offset	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/rating	READ	GET	number_stars_equals number_stars_greater_than_or_equals number_stars_less_than_or_equals limit offset	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/seniority	READ	GET	seniority_name_in limit offset	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/tamu_major_and_course	READ	GET	N/A	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/tutee	CREATE	POST	active_status_name email first_name last_name major_abbreviation phone_number seniority_name	200: OK 400: Bad Request 403: Forbidden	N/A
/tutee	READ	GET	active_status_name_equals email_contains first_name_contains last_name_contains major_abbreviation_contains phone_number_contains seniority_name_in limit offset	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON

Endpoint	Database Operation	Http Request Type	Query Parameters	Status Code	Response
/tutee/update	UPDATE	N/A	email_old active_status_name_new email_new first_name_new last_name_new major_abbreviation_new phone_number_new seniority_name_new	200: OK 400: Bad Request 403: Forbidden 404: Not Found	N/A
/tutee	DELETE	DELETE	email_equals	200: OK 400: Bad Request 403: Forbidden 404: Not Found	N/A
/tutor	CREATE	POST	active_status_name bio_text email first_name last_name listing_title major_abbreviation pay_rate phone_number picture_url seniority_name	200: OK 400: Bad Request 403: Forbidden	N/A
/tutor	READ	GET	active_status_name_equals average_rating_greater_than_or_equals average_rating_less_than_or_equals bio_text_contains contains email_contains first_name_contains last_name_contains listing_title_contains major_abbreviation_contains number_of_ratings_greater_than_or_equals number_of_ratings_less_than_or_equals pay_rate_greater_than_or_equals pay_rate_less_than_or_equals phone_number_contains picture_url_contains seniority_name_in sort_by eligible_course_grade_in eligible_course_number_equals eligible_course_number_greater_than_or_equals eligible_course_number_less_than_or_equals eligible_course_major_abbreviation_contains course_preference_grade_in course_preference_number_equals course_preference_number_greater_than_or_equals course_preference_number_less_than_or_equals course_preference_major_abbreviation_contains location_name_in page_number number_entries_per_page	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/tutor/update	UPDATE	N/A	email_old active_status_name_new bio_text_new transcript course_preferences_new email_new first_name_new last_name_new listing_title_new location_preferences_new major_abbreviation_new pay_rate_new phone_number_new picture_url_new seniority_name_new	200: OK 400: Bad Request 403: Forbidden 404: Not Found	N/A
/tutor	DELETE	DELETE	email_equals	200: OK 400: Bad Request 403: Forbidden 404: Not Found	N/A
/tutor_review	CREATE	POST	appointment_id number_stars review_text tutee_email tutor_email	200: OK 400: Bad Request 403: Forbidden	N/A
/tutor_review	READ	GET	appointment_id_equals number_stars_greater_than_or_equals number_stars_less_than_or_equals review_text_contains tutee_email_contains tutor_email_contains page_number number_entries_per_page sort_by	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON

Endpoint	Database Operation	Http Request Type	Query Parameters	Status Code	Response
/tutor_review/update	UPDATE	N/A	appointment_id_old tutee_email_old tutor_email_old number_stars_new review_text_new	200: OK 400: Bad Request 403: Forbidden 404: Not Found	N/A
/tutor_review	DELETE	DELETE	appointment_id_equals	200: OK 400: Bad Request 403: Forbidden 404: Not Found	N/A
/tutor_time_preference	READ	GET	tutor_email_equals	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/tutor_time_preference/update	UPDATE	N/A	monday_time_intervals tuesday_time_intervals wednesday_time_intervals thursday_time_intervals friday_time_intervals saturday_time_intervals sunday_time_intervals tutor_email	200: OK 400: Bad Request 403: Forbidden 404: Not Found	N/A
/user_active_status	READ	GET	user_active_status_name limit offset	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON
/weekday	READ	GET	weekday_name_in limit offset	200: OK 400: Bad Request 403: Forbidden 404: Not Found	JSON

File Structure

```
+--src/
|  +--main/
|  |  +--java/
|  |  |  +--xyz/
|  |  |  |  +--tamutheo/
|  |  |  |  |  +--databaseAPI/
|  |  |  |  |  |  +--appointment/
|  |  |  |  |  |  |  +--AppointmentController.java
|  |  |  |  |  |  |  +--AppointmentMapper.java
|  |  |  |  |  |  |  +--AppointmentModel.java
|  |  |  |  |  |  |  +--AppointmentService.java
|  |  |  |  |  |  +--appointmentSize/
|  |  |  |  |  |  |  +--AppointmentSizeController.java
|  |  |  |  |  |  |  +--AppointmentSizeMapper.java
|  |  |  |  |  |  |  +--AppointmentSizeModel.java
|  |  |  |  |  |  |  +--AppointmentSizeService.java
|  |  |  |  |  |  +--course/
|  |  |  |  |  |  |  +--CourseController.java
|  |  |  |  |  |  |  +--CourseMapper.java
|  |  |  |  |  |  |  +--CourseModel.java
|  |  |  |  |  |  |  +--CourseService.java
|  |  |  |  |  |  +--DatabaseApiApplication.java
|  |  |  |  |  |  +--location/
|  |  |  |  |  |  |  +--LocationController.java
|  |  |  |  |  |  |  +--LocationMapper.java
|  |  |  |  |  |  |  +--LocationModel.java
|  |  |  |  |  |  |  +--LocationService.java
|  |  |  |  |  |  +--major/
|  |  |  |  |  |  |  +--MajorController.java
|  |  |  |  |  |  |  +--MajorMapper.java
|  |  |  |  |  |  |  +--MajorModel.java
|  |  |  |  |  |  |  +--MajorService.java
|  |  |  |  |  |  +--rating/
|  |  |  |  |  |  |  +--RatingController.java
|  |  |  |  |  |  |  +--RatingMapper.java
|  |  |  |  |  |  |  +--RatingModel.java
|  |  |  |  |  |  |  +--RatingService.java
```

```
| | | | | | | +--seniority/
| | | | | | | | +--SeniorityController.java
| | | | | | | | +--SeniorityMapper.java
| | | | | | | | +--SeniorityModel.java
| | | | | | | | +--SeniorityService.java
| | | | | | | +--tutee/
| | | | | | | | +--TuteeController.java
| | | | | | | | +--TuteeMapper.java
| | | | | | | | +--TuteeModel.java
| | | | | | | | +--TuteeService.java
| | | | | | | +--tutor/
| | | | | | | | +--TutorController.java
| | | | | | | | +--TutorMapper.java
| | | | | | | | +--TutorModel.java
| | | | | | | | +--TutorService.java
| | | | | | | +--tutorCoursePreference/
| | | | | | | | +--TutorCoursePreferenceController.java
| | | | | | | | +--TutorCoursePreferenceMapper.java
| | | | | | | | +--TutorCoursePreferenceModel.java
| | | | | | | | +--TutorCoursePreferenceService.java
| | | | | | | +--tutorEligibleCourse/
| | | | | | | | +--TutorEligibleCourseController.java
| | | | | | | | +--TutorEligibleCourseMapper.java
| | | | | | | | +--TutorEligibleCourseModel.java
| | | | | | | | +--TutorEligibleCourseService.java
| | | | | | | +--tutorLocationPreference/
| | | | | | | | +--TutorLocationPreferenceController.java
| | | | | | | | +--TutorLocationPreferenceMapper.java
| | | | | | | | +--TutorLocationPreferenceModel.java
| | | | | | | | +--TutorLocationPreferenceService.java
| | | | | | | +--tutorReview/
| | | | | | | | +--TutorPendingReviewModel.java
| | | | | | | | +--TutorReviewController.java
| | | | | | | | +--TutorReviewMapper.java
| | | | | | | | +--TutorReviewModel.java
| | | | | | | | +--TutorReviewService.java
```

Frontend

User Guide

Getting Started

First, install any needed packages used in the application:

```
npm i
# or
yarn i
# or
pnpm i
# or
bun i
```

Now, run the development server:

```
npm run dev
# or
yarn dev
# or
pnpm dev
# or
bun dev
```

Open http://localhost:3000 with your browser to see the result.

You can start editing any routable page by modifying their respective *.tsx* file. The page auto-updates as you edit the file.

Compiling the application can be done by:

```
npm run build
# or
yarn build
# or
pnpm build
# or
bun build
```

Start the compiled application with:

```
npm run start
# or
yarn start
# or
pnpm start
# or
bun start
```

These scripts are found in the *package.json* file under *scripts*, any other scripts can be added here.
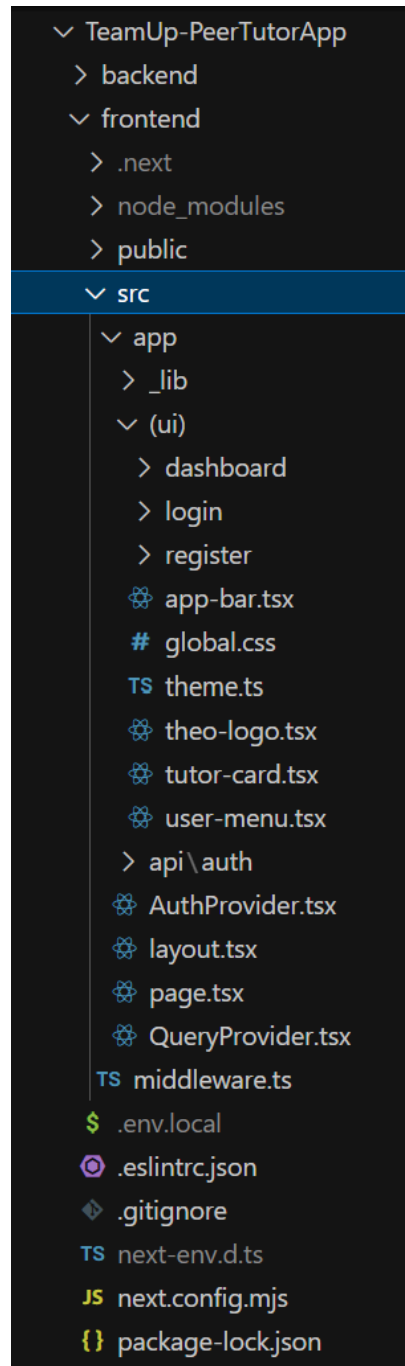
Learn More

To learn more about Next.js, take a look at the following resources:

- Next.js Documentation - learn about Next.js features and API.
- Learn Next.js - an interactive Next.js tutorial.

You can check out the Next.js GitHub repository - your feedback and contributions are welcome
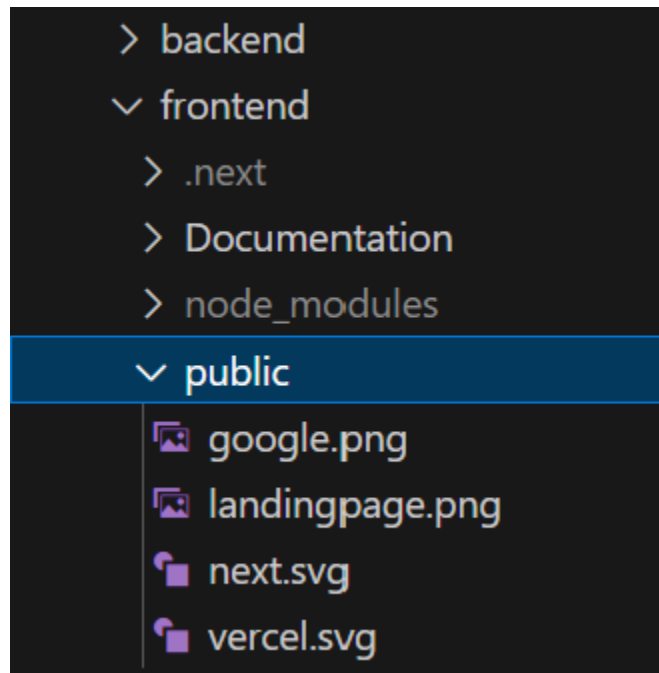
File Structure

Since this is a Next.js application, we have utilized the app router file structure from Next.js. This means that the routes for various pages are determined by the folder names.
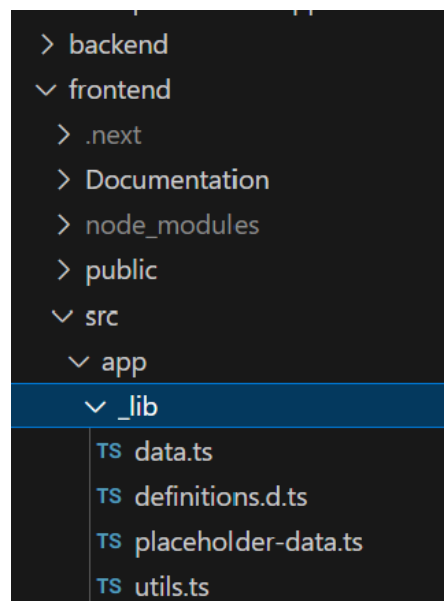

Above is an image of our file structure for our frontend, found under the /frontend folder.

Static Images

All static images and icons are stored under the /frontend/public folder, as highlighted above. This will allow any of the webpages to see and use these images

Global Functions and Definitions (Types/Classes)

The /frontend/src/app/_lib folder contains all global functions and definitions that can be imported into any other page.
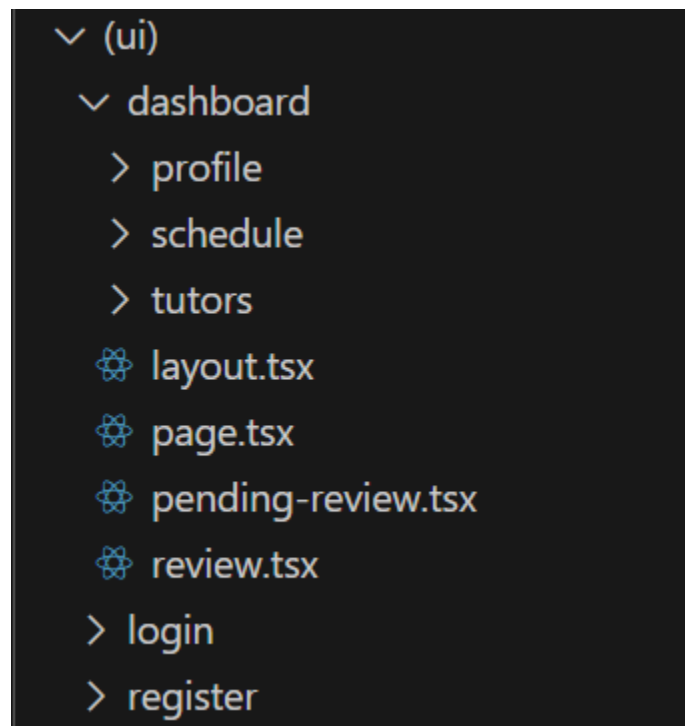
Under the _lib folder, /data.ts stores all of our database manipulation and fetching functions.

/utils.ts contains all of the global helper functions that might be useful for various different pages.

/definitions.d.ts contains all of the class and type declarations that are implicitly imported into all files in the project.

/placeholder-data.ts contains any placeholder database data for testing locally.

Webpages and Routing

The /frontend/src/app/(ui) folder contains all the React Typescript files for the webpages of the application.

Each folder represents a URL path of the application, for example: files under /(ui)/dashboard/ will render under tamutheo.xyz/dashboard

For any given folder, there can be many .tsx, each representing a single React component or multiple related React components, but one file must be called page.tsx and that is the file that will be rendered under that specific path in the application. All other components in the other files can be imported into page.tsx to be rendered.