

CSC309 Project P2 Documentation

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1 Project Structure

1.1 Framework Detail

This project has a backend written in python with the Django REST framework. The dependencies are managed with poetry. The frontend is written in TypeScript with React and Sass, built by Vite and served as static files separately from the backend. Testing of the backend is done with the frontend SDKs using the jest framework.

1.2 Installation

To install dependencies on Ubuntu 20.04, please run `startup.sh`.

On other operating systems, please first install node 20, npm, python 3.12, and pip. Then, run the following command:

```
poetry install
npm install -g yarn
yarn install
```

1.3 Running the project

```
# Run the developmental backend
./run.sh
```

```
# Run the frontend
yarn dev
```

```
# Run tests after the backend is running
yarn jest
```

1.4 File Structure

The backend source code and python module root is in the backend directory. Directly inside it are the django configuration files. Our API implementations and models are located in `backend/meetsphere`.

The frontend sources are located in the `src` directory. The main entry point is `src/main.tsx`. The UI compo-

nents and pages are located in `src/components` and `src/pages` respectively. The API client is located in `src/lib`. The types used in the API client are located in `src/lib/types.ts`. (As of P2, the frontend client SDK is fully connected with the backend, but the UI components has not been updated. Things are not expected to work on the UI at this moment.)

The tests are written in TypeScript and located in `src/lib/tests`. These tests are very comprehensive, covering most usage scenarios and edge cases. The complete test suite can be run with the command `jest` or `yarn jest`.

2 API Endpoints

All API endpoints except for profile picture uploading accept parameters through the JSON body. The documentation below references many object types that are defined in `src/lib/types.ts`.

Please review `src/lib/tests/complete.test.ts` for a typical usage scenario of the API client.

2.1 User Features

2.1.1 Register

This endpoint is used to register a new user.

Endpoint: POST `/register`

Payload: string username, string password, string email

Return: None

2.1.2 Login

This endpoint is used to log in a user. It will return a JWT token that should be stored in the local storage and used for all future authenticated requests.

Endpoint: POST `/login`

Payload: string username, string password

Return: string JWT token

2.1.3 Logout

This endpoint is used to log out the current user. It will also remove the user's JWT token from the local storage.

Endpoint: POST /logout (Authenticated)

Payload: None

Return: None

2.1.4 Get current logged-in user

This endpoint is used to get the currently logged-in user's information.

Endpoint: GET /user (Authenticated)

Payload: None

Return: UserSelf object

2.1.5 Update user info

This endpoint is used to update the currently logged-in user's information.

Endpoint: POST /user (Authenticated)

Payload: Partial UserSelf object

Return: Updated UserSelf object

2.1.6 Upload profile picture

This endpoint is used to upload a new profile picture for the currently logged-in user.

Endpoint: POST /user/pfp (Authenticated)

Payload: Profile picture file (multipart form data)

Return: None

2.2 Contact Features

2.2.1 List contacts

This endpoint is used to get the user's contacts.

Endpoint: GET /contacts (Authenticated)

Payload: None

Return: Array of Contact objects

2.2.2 Add a new contact

This endpoint adds a new contact to the current user's contacts.

Endpoint: POST /contacts (Authenticated)

Payload: NewContact object

Return: None

2.2.3 Delete a contact

This endpoint deletes a contact from the current user's contacts.

Endpoint: DELETE /contacts (Authenticated)

Payload: { id: number }

Return: None

2.2.4 Update a contact

This endpoint is used to update a contact in the current user's contacts.

Endpoint: PATCH /contacts (Authenticated)

Payload: Partial Contact object

Return: None

2.3 Calendar Features

2.3.1 List calendars

This endpoint is used to get the current user's calendars.

Endpoint: GET /calendar (Authenticated)

Payload: None

Return: Array of Calendar objects

2.3.2 Create a new calendar

This endpoint adds a new calendar to the current user's calendar.

Endpoint: POST /calendar (Authenticated)

Payload: NewCalendar object

Return: None

2.3.3 Delete a calendar

This endpoint deletes a calendar from the current user's calendar.

Endpoint: DELETE /calendar (Authenticated)

Payload: { id: number }

Return: None

2.3.4 Update a calendar

This endpoint is used to update a calendar in the current user's calendar.

Endpoint: PATCH /calendar (Authenticated)

Payload: Partial Calendar object

Return: None

2.4 Meeting Features

2.4.1 List meetings

This endpoint is used to get the current user's meetings.

Endpoint: GET /meetings (Authenticated)

Payload: None

Return: Array of Meeting objects

2.4.2 Create a new meeting

This endpoint adds a new meeting to the current user's meetings.

Endpoint: POST /meetings (Authenticated)

Payload: NewMeeting object

Return: None

2.4.3 Delete a meeting

This endpoint deletes a meeting from the current user's meetings.

Endpoint: DELETE /meetings (Authenticated)

Payload: { id: string }

Return: None

2.4.4 Update a meeting

This endpoint is used to update a meeting in the current user's meetings.

Endpoint: PATCH /meetings (Authenticated)

Payload: Partial Meeting object

Return: None

2.4.5 Send out an invitation for a meeting

This endpoint is used to send out an invitation email to ask the invitee to select a time for the meeting.

Endpoint: POST /meetings/{id}/invite (Authenticated)

Payload: None

Return: None

2.4.6 Send out a reminder for a meeting

This endpoint is used to send out a reminder email. There are two cases here which are handled differently: If the invitee already accepted the invitation, the reminder will be a reminder to attend the meeting. If the invitee has not accepted the invitation, the reminder will be a reminder to select a time for the meeting.

Endpoint: POST /meetings/{id}/remind (Authenticated)

Payload: None

Return: None

2.4.7 Get a meeting (from an invitation link)

This endpoint is used to get the meeting information from a UUID sent in an invitation email. This endpoint is not authenticated.

Endpoint: GET /meetings/{id}

Payload: None

Return: Meeting object

2.4.8 Accepting an invitation

This endpoint is used to accept an invitation to a meeting. This endpoint is not authenticated.

Endpoint: POST /meetings/{id}/accept

Payload: { time: string }

Return: None