**API Design**

**Back-end RESTful APIs**

Image

**POST**

API Endpoint: api/image/

Description: Uploads image to the server

Request Requirements:

1. User JWT in header field

2. Image file attachment

3. Metadata(optional)

Server response and status code:

201 - image upload was successful server should return a link to the image and its metadata

400 - malformed request due to unsupported file extension or etc

401 - the JWT attached to the header is invalid or expired(should redirect to login)

409 - image already exists on the server

**GET**

API Endpoint: api/image/:image\_id

Description: Retrieves image from the server as well as its metadata

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - image retrive successful server should return an image

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to view image

404 - image does not exist

**DELETE**

API Endpoint: api/image/:image\_id

Description: Deletes image from the server

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - image delete was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to delete image

404 - image does not exist

**PUT**

API Endpoint: api/image/:image\_id

Description: Modify metadata or the image itself.

Request Requirements:

1. User JWT in header field

2. Image file attachment

3. Metadata(optional)

Server response and status code:

200 - image put request was successful server should return the modified image\_id

400 - malformed request

401 - the JWT attached to the header is invalid or expired(should redirect to login)

404 - image does not exist

User Images

**GET**

API Endpoint: api/user/:user\_id/images

Description: Retrieves the list of images that belongs to the user

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - User image retrieve was successful server should return a list of image links

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to view user images

User logs

**GET**

API Endpoint: api/user/:user\_id/logs

Description: Retrieves the list of logs that belongs to the user

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - User log retrieve was successful server should return a list of log links

401 - the JWT attached to the header is invalid or expired(should redirect to login)

User Profile

**POST**

API Endpoint: api/user/

Description: Creates user profile (Admin only)

Request Requirements:

1. User JWT in header field

2. Body containing user data

Server response and status code:

201 - User profile creation was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to create user profile

**GET**

API Endpoint: api/user/

Description: Retrieves the list of all user profile

Request Requirements:

1. User JWT in header field

2. Admin credentials

Server response and status code:

200 - User profile retrieve was successful server should return a list of user profile

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to view users’ profiles

**PUT**

API Endpoint: api/user/:user\_id

Description: Modifies user profile

Request Requirements:

1. User JWT in header field

2. Body containing the modified data

Server response and status code:

200 - User profile modification was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to modify user's profile

**GET**

API Endpoint: api/user/:user\_id

Description: Retrieves user profile

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - User profile retrieve was successful server should return user profile

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to view user's profile

Project

**GET**

API Endpoint: api/project/:project\_id

Description: Retrieves project

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - Project retrieve was successful server should return project data

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to view project

**GET**

API Endpoint: api/project/

Description: Retrieves projects

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - Project retrieve was successful server should return project list

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**POST**

API Endpoint: api/project

Description: Creates project (Admin only)

Request Requirements:

1. User JWT in header field

2. Project credentials

Server response and status code:

201 - Project creation was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to create project

**PUT**

API Endpoint: api/project/:project\_id

Description: Modifies user profile

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - Project modification was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to modify project

Log

**GET**

API Endpoint: api/log/

Description: Get list of logs

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - Log retrieve was successful server should return log data

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**GET**

API Endpoint: api/log/:log\_id

Description: Get the log mode by idl

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - Log retrieve was successful server should return log data

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**POST**

API Endpoint: api/log

Description: Creates log

Request Requirements:

1. User JWT in header field

Server response and status code:

201 - Log creation was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

Tag

**GET**

API Endpoint: api/tag/

Description: Get list of tags

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - Tag retrieve was successful server should return tag list

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**POST**

API Endpoint: api/tag

Description: Creates tag (Admin only)

Request Requirements:

1. User JWT in header field

2. Admin credentials

Server response and status code:

201 - Tag creation was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to create tag

**PUT**

API Endpoint: api/tag/:tag\_name

Description: Modifies user profile

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - Project modification was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to modify tag

**DELETE**

API Endpoint: api/tag/:tagname

Description: Deletes tag from the server

Request Requirements:

1. User JWT in header field

2. Admin

Server response and status code:

200 - tag delete was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to delete image

404 - image does not exist

**POST**

API Endpoint: api/tag/taglink

Description: Creates taglink

Request Requirements:

1. User JWT in header field

Server response and status code:

201 - Taglink creation was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**DELETE**

API Endpoint: api/tag/taglink/:imageid

Description: Deletes taglink of imageid from the server

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - tag delete was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

Search

**GET**

API Endpoint: api/search/image/:imagename

Description: Searches for

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - search success server should return search results

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**GET**

API Endpoint: api/search/image/:imageid

Description: Searches for

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - search success server should return search results

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**GET**

API Endpoint: api/search/tag/:tagname

Description: Searches for

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - search success server should return search results

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**GET**

API Endpoint: api/search/project/:projectname

Description: Searches for

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - search success server should return search results

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**GET**

API Endpoint: api/search/user/:username

Description: Searches for

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - search success server should return search results

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**GET**

API Endpoint: api/search/date/:udate

Description: Searches for

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - search success server should return search results

401 - the JWT attached to the header is invalid or expired(should redirect to login)

Metadata

**GET**

API Endpoint: api/metadata/

Description: Get list of metadata

Request Requirements:

1. User JWT in header field

Server response and status code:

200 - metadata retrieve was successful server should return metadata data

401 - the JWT attached to the header is invalid or expired(should redirect to login)

**PUT**

API Endpoint: api/metadata/:metaname

Description: Modifies metadata

Request Requirements:

1. User JWT in header field

2. Admin

Server response and status code:

200 - Project modification was successful

401 - the JWT attached to the header is invalid or expired(should redirect to login)

403 - user not authorized to modify metadata

**Imported libraries for code**

Back-end web API will be served using the C# package AspNetCore http

Front-end will make requests to the backend using the http requester Axios