

# eap

Last edited by [InAas Martin Soares](#) 7 months ago

## EAP: Architecture Specification and Prototype

BrainShare seeks to use the internet’s power to connect people towards developing knowledge collaboratively.

### A7: Web Resources Specification

#### 1. Overview

<b>M01: Authentication and Individual Profile</b>	It involves web resources for authentication and profile management, with these system features: registration, login/logout, view/edit profile information and recovery credentials (password).
<b>M02: Publications</b>	Web resources that are associated with tags and their publications, be it questions or answers, and their attributes, such as comments and votes.
<b>M03: Notifications</b>	Web resources related to notifications, be it notifications about answers or comments or about tag subscription.
<b>M04: Moderation</b>	Web resources related to policing user activities in tags (e.g ban users from a tag and delete inappropriate posts)
<b>M05: Administration</b>	Web resources associated with user management, specifically: view, search and ban user accounts, and view system access details for each user. Web resources with static content are associated with this module: about, contact and faq.

#### 2. Permissions

<b>GST</b>	Guest	Users with no privileges
<b>USR</b>	User	Registered users in the platform
<b>OWN</b>	Owner	Users that own information and thus are able to edit it (e.g questions, answers and comments)
<b>MOD</b>	Moderator	Tag moderators (eg. police content, ban users, ...)
<b>ADM</b>	Administrator	System administrators

#### 3. OpenAPI Specification

[https://git.fe.up.pt/lbaw/lbaw2324/lbaw23101/-/blob/main/a7\\_openapi.yml?ref\\_type=heads](https://git.fe.up.pt/lbaw/lbaw2324/lbaw23101/-/blob/main/a7_openapi.yml?ref_type=heads)

```
openapi: '3.0.0'
info:
  version: '1.0'
  title: 'LBAW BrainShare Web API'
  description: 'Web Resources Specification (A7) for collaborative Q&A application'

servers:
  - url: https://api.server.test/v1
    description: Production server

externalDocs:
  description: Find more info here. #####
  url: https://git.fe.up.pt/lbaw/lbaw2324/lbaw23101.git

tags:
  - name: 'M01: Authentication and User Profile'
  - name: 'M02: Publications'
  - name: 'M03: Notifications'
  - name: 'M04: Moderation'
  - name: 'M05: Administration'
```

paths:

#M01 - Authentication and Individual Profile

```
/login:
  get:
    operationId: R101
    summary: 'R101: Login Form'
    description: 'Form page that allows user login. Access: PUB'
    tags:
      - 'M01: Authentication and User Profile'
    responses:
      '200':
        description: 'Ok. Show log-in UI'
  post:
    operationId: R102
    summary: 'R102: Login Action'
    description: 'Web resource that verifies user input in order to perform authentication. Access: GST, USR, MOD, '
    tags:
      - 'M01: Authentication and User Profile'

  requestBody:
    required: true
    content:
      application/x-www-form-urlencoded:
        schema:
          type: object
          properties:
            email:      # <!-- form field name
              type: string
            password:   # <!-- form field name
              type: string
          required:
            - email
            - password

    responses:
      '302':
        description: 'Redirect after processing the login credentials.'
        headers:
          Location:
            schema:
              type: string
            examples:
              302Success:
                description: 'Successful authentication. Redirect to home page.'
                value: '/home'
              302Error:
                description: 'Failed authentication. Redirect to login form.'
                value: '/login'

/logout:

  post:
    operationId: R103
    summary: 'R103: Logout Action'
    description: 'Web resource that logs out the user. Access: USR'
    tags:
      - 'M01: Authentication and User Profile'
    responses:
      '302':
        description: 'Redirect after processing logout.'
        headers:
          Location:
            schema:
              type: string
```

```
examples:
  302Success:
    description: 'Successful logout. Redirect to home.'
    value: '/home'

/register:
  get:
    operationId: R104
    summary: 'R104: Register Form'
    description: 'Form page that allows user to register themselves into the application. Access: GST, ADM'
    tags:
      - 'M01: Authentication and User Profile'
    responses:
      '200':
        description: 'Ok. Show register UI'

  post:
    operationId: R105
    summary: 'R105: Register Action'
    description: 'This web resource registers the user into the system, processing the new user registration form subm
    tags:
      - 'M01: Authentication and User Profile'

  requestBody:
    required: true
    content:
      application/x-www-form-urlencoded:
        schema:
          type: object
          properties:
            name:
              type: string
            email:
              type: string
            birthdate:
              type: string
              format: date
            gender:
              type: string
            password:
              type: string
            password_confirmation:
              type: string
            picture:
              type: object
              format: binary
          required:
            - name
            - email
            - birthdate
            - password
            - password_confirmation

    responses:
      '302':
        description: 'Redirect after processing the new user information.'
        headers:
          Location:
            schema:
              type: string
        examples:
          302Success:
            description: 'Successful registration. Redirect to home page.'
            value: '/home'
          302Failure:
            description: 'Failed registration. Redirect to register form.'
            value: '/register'
```

```
/users/{user_id}:
get:
  operationId: R106
  summary: 'R106: View user profile page.'
  description: 'Shows the individual user profile page, which includes a form to edit profile details. Access: USR,'
  tags:
    - 'M01: Authentication and User Profile'

  parameters:
    - in: path
      name: user_id
      schema:
        type: integer
      required: true

  responses:
    '200':
      description: 'Ok. Show view profile UI'
```

```
/users/{user_id}/edit:

get:
  operationId: R107
  summary: 'R107: Edit Profile Form'
  description: 'Form page that allows user to edit their profile in the application. Access: AUTH, MOD, ADM'
  tags:
    - 'M01: Authentication and User Profile'

  parameters:
    - in: path
      name: user_id
      schema:
        type: integer
      required: true

  responses:
    '200':
      description: 'Ok. Show edit profile UI'

post:
  operationId: R108
  summary: 'R108: Edit Profile Action'
  description: 'This web resource allows the user to change its user profile information. Access: OWN, ADM'
  tags:
    - 'M01: Authentication and User Profile'

  parameters:
    - in: path
      name: user_id
      schema:
        type: integer
      required: true

  requestBody:
    required: false
    content:
      application/x-www-form-urlencoded:
        schema:
          type: object
          properties:
            name:
              type: string
            email:
              type: string
```

```
      birthdate:
        type: string
        format: date
      password:
        type: string
      password_confirmation:
        type: string
      gender:
        type: string
      picture:
        type: object
        format: binary

responses:
  '302':
    description: 'Redirect after processing the updated user information.'
    headers:
      Location:
        schema:
          type: string
    examples:
      302Success:
        description: 'Successful update. Redirect to user page.'
        value: '/user{id}'
      302Failure:
        description: 'Failed update. Redirect to same update user information page.'
        value: '/updateUser/{id}'
```

#M02 - Publications

```
/publications/{tag_id}:
  get:
    operationId: R201
    summary: 'R201: View tag.'
    description: 'Shows an individual tag along with all of the posts associated with it. Access: GST, USR, MOD, ADM'

    tags:
      - 'M02: Publications'

    parameters:
      - in: path
        name: tag_id
        schema:
          type: integer
        required: true

    responses:
      '200':
        description: 'Ok. Show tag UI'

/publications/{tag_id}/{question_id}:
  get:
    operationId: R202
    summary: 'R202: View question.'
    description: 'Shows an individual question along with all of the answers associated with it. Access: GST, USR, MOD, ADM'
    tags:
      - 'M02: Publications'

    parameters:
      - in: path
        name: tag_id
        schema:
          type: integer
        required: true
      - in: path
        name: question_id
```

```

    schema:
      type: integer
      required: true

  responses:
    '200':
      description: 'Ok. Show specific question UI'

/publications/{tag_id}/{question_id}/comments:
  get:
    operationId: R203
    summary: 'R203: View question comments.'
    description: 'Shows comments associated with an individual question. Access: GST, AUTH, MOD, ADM'
    tags:
      - 'M02: Publications'

    parameters:
      - in: path
        name: tag_id
        schema:
          type: integer
          required: true

      - in: path
        name: question_id
        schema:
          type: integer
          required: true

    responses:
      '200':
        description: 'Ok. Show comments UI related to specific question'

/publications/{tag_id}/{answer_id}/comments:
  get:
    operationId: R204
    summary: 'R204: View answer comments.'
    description: 'Shows comments associated with an individual answer. Access: GST, USR, MOD, ADM'
    tags:
      - 'M02: Publications'

    parameters:
      - in: path
        name: tag_id
        schema:
          type: integer
          required: true

      - in: path
        name: answer_id
        schema:
          type: integer
          required: true

    responses:
      '200':
        description: 'Ok. Show comments UI related to specific answer'

/api/publications:
  get:
    operationId: R205
    summary: 'R205: Search publications API'
    description: 'Searches for publication and returns the results as JSON. Access: PUB.'

    tags:
```

```
- 'M02: Publications'

parameters:
- in: query
  name: query
  description: String to use for full-text search
  schema:
    type: string
  required: true
- in: query
  name: tag
  description: Specific tag to be searched on
  schema:
    type: string
  required: false
responses:
'200':
  description: Success
  content:
    application/json:
      schema:
        type: array
        items:
          type: object
          properties:
            id:
              type: integer
            title:
              type: string
            tag:
              type: string

            example:
              - id: 1
                title: Renting a car
                content: Where can i rent a car in Porto?
                tag: Porto

/api/tags:
get:
  operationId: R206
  summary: 'R206: Search tags API'
  description: 'Searches for tags and returns the results as JSON. Access: PUB.'

  tags:
    - 'M02: Publications'

parameters:
- in: query
  name: query
  description: String to use for full-text search
  schema:
    type: string
  required: true

responses:
'200':
  description: Success
  content:
    application/json:
      schema:
        type: array
        items:
          type: object
          properties:
            name:
```

```
        type: string
      description:
        type: string

    example:
      - name: Porto
        description: Tag related to everything that has to do with the city of Porto, Portugal.
```

```
/publications/downvote/{question_answer_id}:
  post:
    operationId: R207
    summary: 'R207: Downvote Question or Answer'
    description: 'Allows the user to downvote a question or answer. Access: USR, MOD, ADM'
    tags:
      - 'M02: Publications'

    parameters:
      - in: path
        name: question_answer_id
        schema:
          type: integer
        required: true

    responses:
      '200':
        description: 'Ok. Downvoted question/answer successfully.'
```

```
/publications/upvote/{question_answer_id}:
  post:
    operationId: R208
    summary: 'R208: Upvote Question or Answer'
    description: 'Allows the user to upvote a question or answer. Access: USR, MOD, ADM'
    tags:
      - 'M02: Publications'

    parameters:
      - in: path
        name: question_answer_id
        schema:
          type: integer
        required: true

    responses:
      '200':
        description: 'Ok. Upvoted question/answer successfully.'
```

#M03 - Notifications

```
/notifications:
  get:
    operationId: R301
    summary: 'R301: View Notifications'
    description: 'Shows the notifications page, displaying updates related to the users subscriptions. Access: GST, USR, MOD, ADM'
    tags:
      - 'M03: Notifications'

    responses:
      '200':
        description: 'Ok. Show notifications UI'

/notifications/subscribe/tag/{tag_id}:
  post:
    operationId: R302
    summary: 'R302: Subscribe to Tag'
```



```
description: 'Allows the user to subscribe to a specific tag, receiving notifications for new questions, answers,
tags:
  - 'M03: Notifications'

parameters:
  - in: path
    name: tag_id
    schema:
      type: integer
    required: true

responses:
  '200':
    description: 'Ok. Subscribed to the tag successfully.'
```

```
/notifications/unsubscribe/tag/{tag_id}:
post:
  operationId: R303
  summary: 'R303: Unsubscribe from Tag'
  description: 'Allows the user to unsubscribe from a specific tag, stopping notifications for new questions, answers,
tags:
  - 'M03: Notifications'

parameters:
  - in: path
    name: tag_id
    schema:
      type: integer
    required: true

responses:
  '200':
    description: 'Ok. Unsubscribed from the tag successfully.'
```

```
/notifications/subscribe/question/{question_id}:
post:
  operationId: R304
  summary: 'R304: Subscribe to Question'
  description: 'Allows the user to subscribe to a specific question, receiving notifications for new answers or comments,
tags:
  - 'M03: Notifications'

parameters:
  - in: path
    name: question_id
    schema:
      type: integer
    required: true

responses:
  '200':
    description: 'Ok. Subscribed successfully.'
```

```
/notifications/unsubscribe/question/{question_id}:
post:
  operationId: R305
  summary: 'R305: Unsubscribe from Question'
  description: 'Allows the user to unsubscribe from a specific question, stopping notifications for new answers or comments,
tags:
  - 'M03: Notifications'

parameters:
  - in: path
    name: question_id
    schema:
```

```
      type: integer
      required: true

responses:
  '200':
    description: 'Ok. Unsubscribed successfully.'
```

```
responses:
  '200':
    description: 'Ok. User banned from tag'
```

/moderation/users/unban/{tag\_id}/{user\_id}:

```
post:
  operationId: R404
  summary: 'R404: unban user from tag.'
  description: 'unbans a specific user from a tag. Access: MOD, ADM'
  tags:
    - 'M04: Moderation'
```

```
parameters:
  - in: path
    name: tag_id
    schema:
      type: integer
    required: true
  - in: path
    name: user_id
    schema:
      type: integer
    required: true
```

```
responses:
  '200':
    description: 'Ok. User unbanned from tag'
```

# M05 - Administration

/administration/tag/create:

```
get:
  operationId: R501
  summary: 'R501: Tag creation Form'
  description: 'Form page that allows admin to create a tag. Access: ADM'
  tags:
    - 'M05: Administration'
```

```
responses:
  '200':
    description: 'Ok. Show tag creation UI'
```

```
post:
  operationId: R502
  summary: 'R502: tag creation'
  description: 'Web resource that verifies admin input in order to create a tag. Access: ADM'
  tags:
    - 'M05: Administration'
```

```
requestBody:
  required: true
  content:
    application/x-www-form-urlencoded:
      schema:
        type: object
        properties:
          name:
            type: string
            description:
              type: string
          required:
            - name
            - description
```

```
responses:
  '302':
```

```
description: 'Redirect after processing the login credentials.'
headers:
  Location:
    schema:
      type: string
examples:
  302Success:
    description: 'Successful tag creation. Redirect to home page.'
    value: '/publications/{tag_id}'
  302Error:
    description: 'Failed to create. Redirect to create tag form.'
    value: '/administration/tag/create'

/administration/users/ban/{user_id}:
  post:
    operationId: R503
    summary: 'R503: Ban user site-wide.'
    description: 'Bans a specific user from the website, not allowing him to access the site at all. Access: ADM'
    tags:
      - 'M05: Administration'

    parameters:
      - in: path
        name: user_id
        schema:
          type: integer
        required: true

    responses:
      '200':
        description: 'Ok. User banned'

/administration/users/unban/{user_id}:
  post:
    operationId: R504
    summary: 'R504: Unban user site-wide.'
    description: 'Unbans a specific user from the website, allowing it to access all of its features again. Access:
    tags:
      - 'M05: Administration'

    parameters:
      - in: path
        name: user_id
        schema:
          type: integer
        required: true

    responses:
      '200':
        description: 'Ok. User unbanned'

...

```

## A8: Vertical prototype

The Vertical Prototype incorporates the integration of high-priority features identified as essential (marked with an asterisk) in both the common and theme requirements documents. The primary objective of this artifact is to validate the proposed architecture while simultaneously fostering familiarity with the technologies employed in the project.

The implementation is grounded in the LBAW Framework and encompasses comprehensive work across all layers of the solution's architecture, including the user interface, business logic, and data access. The prototype features the implementation of pages for visualizing, inserting, editing, and removing information, along with the enforcement of permissions control for access to these pages. Additionally, it includes the presentation of error and success messages to enhance user experience.

1. Implemented Features

1.1. Implemented User Stories

US10	Delete Question	high	As an Owner, I want the ability to delete my posted question if it is no longer relevant or necessary.
US11	Edit Answer	high	As an Owner, I need the capability to edit the content of my posted answer to improve its clarity or relevance.
US12	Delete Answer	high	As an Owner, I want the capability to delete my posted answer if it is no longer accurate or relevant.
US13	Write a comment	high	As an Authenticated User, I want to be able to comment on questions/answers to engage in conversations with other users.
US14	View My Questions	high	As an Authenticated User,, I want the ability to view a list of questions that I have posted so that I can keep track of my previous questions and their responses.
US15	View My Answers	high	As an Authenticated User, I want the capability to view a list of answers that I have provided so that I can revisit my responses.
US16	Sign-Up	high	As a Guest, I want to be able to sign up for an account, so that I can become a registered user.
US17	Submit a question/ answer	high	As an Authenticated User, I want to be able to submit a new questions/answers to a topic, including text and links.

1.2. Implemented Web Resources

Module M01: Authentication and Individual Profile

Web Resource Reference	URL
R101: Login Form	GET /login
R102: Login Action	POST /login
R103: Logout Action	POST /logout
R104: Register Form	GET /register
R105: Register Action	POST /register
R106: View user profile page	GET /user/{user_id}
R107: Edit Profile Form	GET /user/{user_id}/edit
R108: Edit Profile Action	POST /user/{user_id}/edit

Module M02: Publications

Web Resource Reference	URL
R201: View Tag	GET /publication/{tag_id}
R202: View Question	GET /publication/{tag_id}/{question_id}
R203: View Question comments	GET /publication/{tag_id}/{question_id}/comments
R204: View Answer comments	GET /publication/{tag_id}/{answer_id}/comments
R205: Search Publications API	GET /api/publications
R206: Notifications	GET /notifications
R207: Downvote Question	POST /publication/{downvote}/{question_answer_id}
R208: Upvote Question	POST /publication/{upvote}/{question_answer_id}

Module M03: Tag

Web Resource Reference	URL
R301: Tag creation Form	GET /administration/tag/create
R302: Tag creation	POST /administration/tag/create
R303: Tag edit	POST /administration/tag/edit/{tag_id}
<u>R304</u> : Tag delete	POST /administration/tag/delete/{tag_id}

Module M04: Administration

Web Resource Reference	URL
R401: User creation Form	GET /administration/create-user
R402: User creation	POST /administration/create-user
R403: Edit user page	GET /administration/edit-user
R404: Edit user form	GET /administration/edit-user/{id}
<u>R405</u> : Edit user	POST /administration/edit-user/{id}
R406: Delete user	GET /administration/delete-user
<u>R407</u> : Delete user	DELETE /administration/delete-user
R408: Search user	GET /administration/search-user
<u>R409</u> : Search user	GET /administration/search-user/search
R410: Block user	GET /administration/block-user
R411: Block user	PUT /administration/block-user/{id}
R412: Show appeal	GET /administration/show-appeal
R413: Show appeal	DELETE /administration/show-appeal

Module M05: Question

Web Resource Reference	URL
R501: Question creation Form	GET /question
R502: Question creation	POST /question
R503: Review creation	POST /question/{id}
R504: Review question	PUT /question/{id}
<u>R505</u> : Answer	GET /question/{id}/answer
R506: Answer creation	POST /question/{id}/answer
R507: Delete answer	DELETE /question/{id}/answer
R508: Mark answer as correct	GET /question/{id}/mark-as-correct
R509: Edit answer form	GET /question/{id}/answer/{answer_id}/edit
R510: Edit answer	PUT /question/{id}/answer/{answer_id}/edit
R511: Delete question	DELETE /question/{id}
R512: Edit question form	GET /question/{id}/edit
R513: Edit question	PUT /question/{id}/edit
R514: Comment	GET /question/{id}/comments
R515: Comment creation	POST /question/{id}/comments
R516: Delete Comment	DELETE /question/{id}/comments
R517: Question comment form	GET /question/{id}/comments/{comment_id}/edit
R518: Update question comment	PUT /question/{id}/comments/{comment_id}/edit
R519: Answer comment	GET /question/{id}/answer/{answer_id}/comments
R520: Create answer comment	POST /question/{id}/answer/{answer_id}/comments
R521: Delete answer comment	DELETE /question/{id}/answer/{answer_id}/comments
R522: Answer comment form	GET /question/{id}/answer/{answer_id}/comments/{comment_id}/edit
R523: Edit answer comment	PUT /question/{id}/answer/{answer_id}/comments/{comment_id}/edit

2. Prototype

The prototype is available at <https://lbaw23136.lbaw.fe.up.pt/>

Credentials

- admin user: [admin@gmail.com](#)/1234
- admin user: [admin2@gmail.com](#)/1234

The code is available at <https://git.fe.up.pt/lbaw/lbaw2324/lbaw23101>

Revision history

Changes made to the first submission:

1. Implemented Web resources - updated tables

GROUP23136, 22/11/2023

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