

EAP: Architecture Specification and Prototype

A7: Web Resources Specification

This artifact presents an overview of the web resources implemented in the vertical prototype, organized into modules. It also includes the permissions used in the modules to establish the conditions of access to resources.

1. Overview

Identifier	Module	Description
M01	Authentication	Web resources associated with user authentication. Includes the following system features: login, registration and logout.
M02	Users	Web resources associated with users. Includes the following system features: view and search users, view and edit personal profile information.
M03	Posts	Web resources associated with posts - questions, answers and comments. Includes the following system features: list and search questions, view recent, top, and unanswered questions. Users can post questions, answers, or comments, edit their personal questions and answers, view question details, vote on posts, and delete questions and answers.
M04	Games	Web resources associated with games. Includes the following system features: view game categories and game details, list questions related to a specific game.
M05	Administration	Web resources associated with user management, specifically the system feature to ban or unban user accounts.

2. Permissions

This section defines the permissions used in the modules to establish the conditions of access to resources.

Identifier	Name	Description
GST	Guest	Unauthenticated users
USR	User	Authenticated users
OWN	Owner	Users who are owners of the information
ADM	Administrator	System administrators

3. OpenAPI Specification

This section includes the complete API specification in OpenAPI (YAML) for the vertical prototype (A8).

link : https://git.fe.up.pt/lbaw/lbaw2324/lbaw23143/-/blob/main/docs/a7_openapi.yaml?plain=0

```
openapi: 3.0.0

info:
  version: '1.0'
  title: 'GameOn Web API'
  description: 'Web Resources Specification (A7) for GameOn'

servers:
- url: https://lbaw23143.lbaw.fe.up.pt/
  description: Production server

externalDocs:
  description: Find more info here.
  url: https://git.fe.up.pt/lbaw/lbaw2324/lbaw23143/-/wikis/eap

tags:
- name: 'M01: Authentication'
- name: 'M02: Users'
- name: 'M03: Posts'
- name: 'M04: Games'
- name: 'M05: Administration'

paths:
  /login:
    get:
      operationId: R101
      summary: 'R101: Login Form'
      description: 'Provide login form. Access: GST'
      tags:
        - 'M01: Authentication'
      responses:
        '200':
          description: 'Ok. Show Log-in UI'
    post:
      operationId: R102
      summary: 'R102: Login Action'
      description: 'Processes the login form submission. Access: GST'
      tags:
        - 'M01: Authentication'

  requestBody:
    required: true
    content:
      application/x-www-form-urlencoded:
        schema:
          type: object
          properties:
            email:
              type: string
            password:
              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:

get:

operationId: R103

summary: 'R103: Logout Action'

description: 'Logout the current authenticated user. Access: USR'

tags:

- 'M01: Authentication'

responses:

'302':

description: 'Redirect after processing logout.'

headers:

Location:

schema:

type: string

examples:

302Success:

description: 'Successful logout. Redirect to home page.'

value: '/home'

/register:

get:

operationId: R104

summary: 'R104: Register Form'

description: 'Provide new user registration form. Access: GST'

tags:

- 'M01: Authentication'

responses:

'200':

description: 'Ok. Show Sign-Up UI'

post:

operationId: R105

summary: 'R105: Register Action'

description: 'Processes the new user registration form submission. Access:

GST'

tags:

```

- 'M01: Authentication'

requestBody:
  required: true
  content:
    application/x-www-form-urlencoded:
      schema:
        type: object
        properties:
          name:
            type: string
          username:
            type: string
          email:
            type: string
            format: email
          password:
            type: string
            format: password
          password_confirmation:
            type: string
            format: password
        required:
          - name
          - username
          - email
          - password
          - password_confirmation

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

/home:
  get:
    operationId: R201
    summary: 'R201: View GameOn home page'
    description: 'Show GameOn home page. Access: GST, USR'
    tags:
      - 'M02: Users'

responses:

```

```
'200':
  description: 'Ok. Show home page'

/users:
  get:
    operationId: R202
    summary: 'R202: View all users'
    description: 'Show all GameOn users. Access: GST, USR'
    tags:
      - 'M02: Users'

    responses:
      '200':
        description: 'Ok. Show users lists'

/users/{id}:
  get:
    operationId: R203
    summary: 'R203: View user profile page'
    description: 'Show the individual user profile. Access: GST, USR'
    tags:
      - 'M02: Users'

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

    responses:
      '200':
        description: 'Ok. Show User Profile UI'

/users/questions/{id}:
  get:
    operationId: R204
    summary: 'R204: View user questions'
    description: 'Show user questions page. Access: GST, USR'
    tags:
      - 'M02: Users'

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

    responses:
      '200':
        description: 'OK. Show the questions page for an individual user'
```

```
/user/answers/{id}:
  get:
    operationId: R205
    summary: 'R205: View user answers'
    description: 'Show user answers page. Access: GST, USR'
    tags:
      - 'M02: Users'

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

    responses:
      '200':
        description: 'OK. Show the answers page for an individual user'

/api/users:
  get:
    operationId: R206
    summary: 'R206: Search for users'
    description: 'Search for users with filter. Access: GST, USR'
    tags:
      - 'M02: Users'

    parameters:
      - in: query
        name: search
        description: 'Search content'
        schema:
          type: string
        required: true

      - in: query
        name: filter
        description: 'Filter users'
        schema:
          type: string
        required: true

      - in: query
        name: order
        description: 'Order users'
        schema:
          type: string
        required: true

    responses:
      '200':
        description: 'Success. Returns HTML code containing the list of users'
```

```
that match the search'

/questions:
  get:
    operationId: R301
    summary: 'R301: View all questions'
    description: 'Show all questions. Access: GST, USR'
    tags:
      - 'M03: Posts'

    responses:
      '200':
        description: 'OK. Show the questions page'

  post:
    operationId: R302
    summary: 'R302: Search questions'
    description: 'Search questions. Access: GST, USR'
    tags:
      - 'M03: Posts'
    parameters:
      - name: filterCriteria
        in: query
        description: 'Filter criteria for search'
        required: false
        schema:
          type: string
      - name: searchInput
        in: query
        description: 'Input for search'
        required: false
        schema:
          type: string
      - name: orderCriteria
        in: query
        description: 'Order criteria for search'
        required: false
        schema:
          type: string
    responses:
      '200':
        description: 'OK. Search successful'

/new-question:
  get:
    operationId: R303
    summary: 'R303: Create a new question'
    description: 'Create a new question. Access: USR'
    tags:
      - 'M03: Posts'
    responses:
      '200':
        description: 'OK. Show the new question page'
```

```
post:
  operationId: R304
  summary: 'R304: Store a new question'
  description: 'Store a new question. Access: USR'
  tags:
    - 'M03: Posts'
  requestBody:
    required: true
    content:
      application/x-www-form-urlencoded:
        schema:
          type: object
          properties:
            title:
              type: string
            content:
              type: string
            game:
              type: string
            user:
              type: integer
          required:
            - title
            - content
            - game
            - user
  responses:
    '200':
      description: 'OK. Question stored successfully'

/questions/{id}:
get:
  operationId: R305
  summary: 'R305: View a specific question'
  description: 'View a specific question. Access: GST, USR'
  tags:
    - 'M03: Posts'
  parameters:
    - in: path
      name: id
      schema:
        type: integer
      required: true
  responses:
    '200':
      description: 'OK. Show the specific question'

/comments/store:
post:
  operationId: R306
  summary: 'R306: Store a comment'
  description: 'Store a comment. Access: USR'
  tags:
    - 'M03: Posts'
```



```
requestBody:
  required: true
  content:
    application/x-www-form-urlencoded:
      schema:
        type: object
        properties:
          content:
            type: string
          user:
            type: integer
          answer:
            type: integer

        required:
          - content
          - user
          - answer

responses:
  '200':
    description: 'OK. Comment stored successfully'

/categories:
  get:
    operationId: R401
    summary: 'R401: View all game categories'
    description: 'Show all game categories. Access: GST, USR'
    tags:
      - 'M04: Games'

    responses:
      '200':
        description: 'OK. Show the game categories page'

/categories/{id}:
  get:
    operationId: R402
    summary: 'R402: View game category page'
    description: 'Show game category page. Access: GST, USR'
    tags:
      - 'M04: Games'

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

    responses:
      '200':
        description: 'OK. Show the game category page'

/game/{id}:
  get:
```

```
get:
  operationId: R403
  summary: 'R403: View game page'
  description: 'Show game page. Access: GST, USR'
  tags:
    - 'M04: Games'

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

responses:
  '200':
    description: 'OK. Show the game page'

/api/users/{id}:
  post:
    operationId: R501
    summary: 'R501: Update user status'
    description: 'Update user status (ban or unban user account). Access: ADM'
    tags:
      - 'M05: Administration'

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

    requestBody:
      required: true
      content:
        application/x-www-form-urlencoded:
          schema:
            type: object
            properties:
              new_status:
                type: string
                enum: ['Active', 'Banned']
                description: 'The new status for the user account (active or
banned).'
            required:
              - new_status

    responses:
      '200':
        description: 'Success. User status updated.'
      '401':
        description: 'Unauthorized. The action requires proper authentication
and authorization.'
```

```
    '404':
      description: 'User not found.'

/api/users/{id}/edit:
  post:
    operationId: R207
    summary: 'R207: Edit user profile'
    description: 'Edit user profile information. Access: OWN'
    tags:
      - 'M02: Users'

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

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

            required:
              - name
              - username
              - email
              - description

    responses:
      '200':
        description: 'Success. User profile updated.'
      '401':
        description: 'Unauthorized. The action requires proper authentication and authorization.'
      '404':
        description: 'User not found.'

/api/questions:
  get:
    operationId: R307
```

```
summary: 'R307: List Questions'
description: 'Retrieve a list of questions. Access: GST, USR'
tags:
  - 'M03: Posts'
responses:
  '200':
    description: 'Success. List of questions retrieved.'
```

/api/questions/{id}/delete:

```
delete:
  operationId: R308
  summary: 'R308: Delete Question'
  description: 'Delete an existing question. Access: OWN'
  tags:
    - 'M03: Posts'
  parameters:
    - in: path
      name: id
      schema:
        type: integer
      required: true
  responses:
    '200':
      description: 'Success. Question deleted.'
    '401':
      description: 'Unauthorized. The action requires proper authentication and authorization.'
    '404':
      description: 'Question not found.'
```

/api/questions/{id}/vote:

```
post:
  operationId: R309
  summary: 'R309: Vote for Question'
  description: 'Vote for a question. Access: USR'
  tags:
    - 'M03: Posts'
  parameters:
    - in: path
      name: id
      schema:
        type: integer
      required: true
  responses:
    '200':
      description: 'Success. Vote registered for the question.'
    '401':
      description: 'Unauthorized. The action requires proper authentication and authorization.'
    '404':
      description: 'Question not found.'
```

```
/api/questions/{id}/unvote:
```

```
  post:
```

```
    operationId: R310
```

```
    summary: 'R310: Unvote for Question'
```

```
    description: 'Remove vote for a question. Access: USR'
```

```
    tags:
```

```
      - 'M03: Posts'
```

```
    parameters:
```

```
      - in: path
```

```
        name: id
```

```
        schema:
```

```
          type: integer
```

```
          required: true
```

```
    responses:
```

```
      '200':
```

```
        description: 'Success. Vote removed for the question.'
```

```
      '401':
```

```
        description: 'Unauthorized. The action requires proper authentication  
and authorization.'
```

```
      '404':
```

```
        description: 'Question not found.'
```

```
/api/questions/{id}/edit:
```

```
  put:
```

```
    operationId: R311
```

```
    summary: 'R311: Edit Question'
```

```
    description: 'Edit an existing question. Access: OWN'
```

```
    tags:
```

```
      - 'M03: Posts'
```

```
    parameters:
```

```
      - in: path
```

```
        name: id
```

```
        schema:
```

```
          type: integer
```

```
          required: true
```

```
    requestBody:
```

```
      required: true
```

```
      content:
```

```
        application/x-www-form-urlencoded:
```

```
          schema:
```

```
            type: object
```

```
            properties:
```

```
              user:
```

```
                type: integer
```

```
              title:
```

```
                type: string
```

```
              content:
```

```
                type: string
```

```
            required:
```

```
              - user
```

```
              - title
```

```
              - content
```

```
responses:
  '200':
    description: 'Success. Question edited.'
  '401':
    description: 'Unauthorized. The action requires proper authentication
and authorization.'
  '404':
    description: 'Question not found.'
```

/api/answers:

```
post:
  operationId: R312
  summary: 'R312: Store Answer'
  description: 'Store a new answer. Access: USR'
  tags:
    - 'M03: Posts'
  requestBody:
    required: true
    content:
      application/x-www-form-urlencoded:
        schema:
          type: object
          properties:
            content:
              type: string
              description: 'The content of the answer.'
            questionId:
              type: integer
              description: 'The ID of the question.'
            userId:
              type: integer
              description: 'The ID of the user.'
```

responses:

```
'200':
  description: 'Success. Answer stored.'
'401':
  description: 'Unauthorized. The action requires proper authentication
and authorization.'
```

/api/answers/{id}/edit:

```
put:
  operationId: R313
  summary: 'R313: Edit Answer'
  description: 'Edit an existing answer. Access: OWN'
  tags:
    - 'M03: Posts'
  parameters:
    - in: path
      name: id
      schema:
        type: integer
      required: true
  requestBody:
```

```

    required: true
    content:
      application/x-www-form-urlencoded:
        schema:
          type: object
          properties:
            content:
              type: string
              description: 'The content of the answer.'
            userId:
              type: integer
              description: 'The ID of the user.'
    responses:
      '200':
        description: 'Success. Answer edited.'
      '401':
        description: 'Unauthorized. The action requires proper authentication
and authorization.'
      '404':
        description: 'Answer not found.'

/api/answers/{id}/delete:
  delete:
    operationId: R314
    summary: 'R314: Delete Answer'
    description: 'Delete an existing answer. Access: OWN'
    tags:
      - 'M03: Posts'
    parameters:
      - in: path
        name: id
        schema:
          type: integer
        required: true
    responses:
      '200':
        description: 'Success. Answer deleted.'
      '401':
        description: 'Unauthorized. The action requires proper authentication
and authorization.'
      '404':
        description: 'Answer not found.'

```

A8: Vertical prototype

This artifact is about the vertical prototype of the project. It includes the implementation of the high priority user stories and also the web resources.

1. Implemented Features

1.1. Implemented User Stories

The user stories that were implemented in the prototype are described in the following table.

User Story reference	Name	Priority	Description
US01	See home page	High	As a User, I want to have access to a homepage, so that I can understand what the application is about.
US02	View posted Q&A's	High	As a User, I want to view the questions and answers posted by other members so that I can learn from their experiences and knowledge.
US03	Exact match search	High	As a User, I want an exact match search so that I can quickly find specific posts.
US04	View top questions	High	As a User, I want to be able to view the top questions, so that I can have easy access to the most popular questions.
US05	Browse questions	High	As a User, I want to browse questions easily so that I can discover a variety of topics related to games and expand my knowledge.
US06	Full-text search	High	As a User, I want a full-text search functionality so that I can find information across all aspects of questions and answers.
US07	Search filters	High	As a User, I want to use search filters based on keywords so that I can narrow down my search results and quickly find specific information about games.
US09	View recent questions	High	As a User, I want to be able to view recently made questions, so that I can easily stay updated on the latest discussions.
US13	Order search results	High	As a User, I want to be able to sort the search results using different filters so that I can find what I want easily.
US14	View question details	High	As a User, I want to be able to view question details, so that I can have a deeper knowledge about a question.
US15	View user profiles	High	As a User, I want to view user profiles, so that I can see information about that user
US16	Placeholders in Form Inputs	High	As a User, I want placeholders in form inputs so that I can clearly understand what information is expected in each field.
US19	Sign-up	High	As a Guest, I want the option to create an account easily, so that I can become an active participant in the future.
US20	Sign-in	High	As a Guest, I want to be able to authenticate into the system, so that I can post my own questions and answers.
US23	Logout	High	As a User, I want to be able to sign out of my account.

User Story reference	Name	Priority	Description
US24	View my profile	High	As a User, I want to be able to view my user profile so that I can keep it updated.
US25	View my questions	High	As a User, I want to see my questions, so that I can easily track what I have been asking.
US26	View my answers	High	As a User, I want to be able to view my answers, so that I can easily track my posts contribution.
US27	Post questions	High	As a User, I want to post a question, so that I can seek guidance or information from the gaming community.
US28	Post answers	High	As a User, I want to provide answers to questions asked by others, so that I can share my knowledge and help fellow gamers.
US29	Edit question	High	As a User, I want to be able to edit my questions, so that I can correct mistakes or remove outdated information.
US30	Edit answer	High	As a User, I want to be able to edit my answers so that I can revise and enhance my responses based on new information or feedback.
US31	Delete question	High	As a User, I want to be able to delete questions, so that I can have control over the content I have posted.
US32	Delete answer	High	As a user, I want to be able to delete answers, so that I can have control over the content I have contributed.
US33	Edit profile	High	As a User, I want to change profile information, so that I can keep it updated and relevant.
US34	Vote on post	High	As a User, I want to upvote or downvote questions and answers, so that I can show my appreciation or my concerns for content and contribute to its visibility on the platform.
US35	Comment on post	High	As a User, I want to be able to comment on questions and answers, so that I can engage in discussions and seek clarification.
US53	Block and unblock user accounts	High	As an administrator, I want to be able to block user accounts so that I can maintain a safe and respectful community environment.

1.2. Implemented Web Resources

The web resources that were implemented in the prototype are described in the next section.

Module M01: Authentication

Web Resource Reference	URL
------------------------	-----

Web Resource Reference	URL
R101: Login Form	/login
R102: Login Action	/login
R103: Logout Action	/logout
R104: Register Form	/register
R105: Register Action	/register

Module M02: Users

Web Resource Reference	URL
R201: View GameOn Home page	/home
R202: View all users	/users
R203: View user profile page	/users/{id}
R204: View user questions	/users/questions/{id}
R205: View user answers	/users/answers/{id}
R206: Search for users	/api/users
R207: Edit user profile	/api/users/{id}/edit

Module M03: Posts

Web Resource Reference	URL
R301: View all questions	/questions
R302: Search questions	/questions
R303: Create a new question	/new-question
R304: Store a new question	/new-question
R305: View a specific question	/questions/{id}
R306: Store a comment	/comments/store
R307: List Questions	/api/questions
R308: Delete Question	/api/questions/{id}/delete
R309: Vote for Question	/api/questions/{id}/vote
R310: Unvote for Question	/api/questions/{id}/unvote
R311: Edit Question	/api/questions/{id}/edit
R312: Store Answer	/api/answer
R313: Edit Answer	/api/answers/{id}/edit

Web Resource Reference	URL
R314: Delete Answer	/api/answers/{id}/delete

Module M04: Games

Web Resource Reference	URL
R401: View all game categories	/categories
R402: View game category page	/categories/{id}
R403: View game page	/game/{id}

Module M05: Administration

Web Resource Reference	URL
R501: Update user status	/api/users/{id}

2. Prototype

The prototype is available at: <https://lbaw23143.lbaw.fe.up.pt>

Credentials:

- admin user: johndoe@example.com/1234
- regular user: chloehall@email.com/1234

The code is available at: <https://git.fe.up.pt/lbaw/lbaw2324/lbaw23143>

Revision history

No changes yet.

GROUP23143, 23/11/2023

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