

A7: Web Resources Specification

This artifact presents the documentation for ProjeTatu, including the CRUD (create, read, update, delete) operations for each resource implemented in the vertical prototype.

1. Overview

Module	Description
M01: Authentication and User Profile	Web resources associated with user authentication and individual profile management. Includes login/logout, registration, view and edit personal profile information.
M02: User Administration and Static pages	Web resources associated with user management, specifically: view and search users, delete user accounts, view and change user information, and view system access details for each user. Web resources with static content are associated with this module: dashboard, about, contact, services and faq.
M03: Projects	Web Resources associated with projects. Includes the following system features: view project board and info, create and edit projects, archive projects, mark projects as favorites, delete projects, create and edit tasks, assign users to tasks, create and edit comments on tasks, create invitations to join a project.
M04: Search	Web Resources associated with the search system. Includes the following system features: search projects, search tasks inside a project.

2. Permissions

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

Identifier	Permission	Description
PUB	Public	Users without privileges
USR	User	Authenticated Users
OWN	Owner	Users that are are owners of information
MBR	Member	Project Members
COR	Coordinator	Project Coordinators
ADM	Administrator	System administrators

3. OpenAPI Specification

Link to [.yaml](#)

```
openapi: 3.0.0
```

```
info:
  version: '1.0'
  title: 'LBAW ProjeTatu Web API'
  description: 'Web Resources Specification (A7) for ProjeTatu'
```

```
servers:
- url: http://lbaw23156.lbaw.fe.up.pt
  description: Production server
```

```
tags:
- name: 'M01: Authentication and Individual Profile'
- name: 'M02: Projects'
- name: 'M03: Search'
- name: 'M04: User Administration and Static pages'
```

```
paths:
```

```
#####
#####
##### M01: Authentication and
Individual Profile #####
#####
#####
```

```
/login:
```

```
  get:
    operationId: R101
    summary: 'R101: Login Form'
    description: 'Provide login form. Access: PUB'
    tags:
      - 'M01: Authentication and Individual Profile'
```

```
  responses:
    '200':
      description: 'Ok. Show log-in UI'
```

```
  post:
    operationId: R102
    summary: 'R102: Login Action'
    description: 'Processes the login form submission. Access: PUB'
    tags:
      - 'M01: Authentication and Individual 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 Homepage.'
                value: '/'
              302Error:
                description: 'Failed authentication. Redirect to login form.'
                value: '/login'

/logout:
  post:
    operationId: R103
    summary: 'R103: Logout Action'
    description: 'Logout the current authenticated user. Access: USER, ADMIN'
    tags:
      - 'M01: Authentication and Individual Profile'

    responses:
      '302':
        description: 'Redirect after processing logout.'
        headers:
          Location:
            schema:
              type: string
            examples:
              302Success:
                description: 'Successful logout. Redirect to login form.'
                value: '/login'

/register:
  get:
    operationId: R104
    summary: 'R104: Register Form'
    description: 'Provide new user registration form. Access: PUBLIC'
    tags:
      - 'M01: Authentication and Individual Profile'

    responses:
      '200':
        description: 'Ok. Show sign-up UI'

  post:
    operationId: R105
```

```

summary: 'R105: Register Action'
description: 'Processes the new user registration form submission. Access:
PUB'
tags:
  - 'M01: Authentication and Individual Profile'

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

responses:
  '302':
    description: 'Redirect after processing the new user information.'
    headers:
      Location:
        schema:
          type: string
    examples:
      302Success:
        description: 'Successful authentication. Redirect to user
profile.'
        value: '/users/{id}'
      302Failure:
        description: 'Failed authentication. Redirect to register form.'
        value: '/register'

/users/{id}:
  get:
    operationId: R106
    summary: 'R106: View user profile'
    description: 'Show the individual user profile. Access: USR'
    tags:
      - 'M01: Authentication and Individual Profile'

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

```

```
responses:
  '200':
    description: 'Ok. Show view profile UI'
  '404':
    description: 'Not Found. User id not found'

/users/{id}/edit:
  get:
    operationId: R107
    summary: 'R107: Edit user profile'
    description: 'Show the edit page. Access: OWN'
    tags:
      - 'M01: Authentication and Individual Profile'

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

    responses:
      '200':
        description: 'Ok. Show view profile UI'
      '404':
        description: 'Not Found. User id not found'

  post:
    operationId: R108
    summary: 'R108: Edit user profile'
    description: 'Show the edit page. Access: OWN, ADM'
    tags:
      - 'M01: Authentication and Individual Profile'

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

    responses:
      '302':
```

```

    description: 'Redirect after processing the edited user information.'
    headers:
      Location:
        schema:
          type: string
        examples:
          302Success:
            description: 'Successful authentication. Redirect to user
profile.'
            value: '/users/{id}'
          302Failure:
            description: 'Failed edit. Redirect to edit form.'
            value: '/users/{id}/edit'

```

```

/:
  get:
    operationId: R109
    summary: 'R109: Home Page'
    description: 'Show the Home page. Access: USR'
    tags:
      - 'M01: Authentication and Individual Profile'

```

```

  responses:
    '302':
      description: 'Ok. Show Homepage'
      headers:
        Location:
          schema:
            type: string
          examples:
            302Success:
              description: 'Redirect to Homepage.'
              value: '/'
            302Error:
              description: 'Redirect to login form.'
              value: '/login'

```

```

#####
#####
##### M02:
Projects
#####
#####
#####

```

```

/project/{id}:
  get:
    operationID: R201
    summary: 'R201: View project page'
    description: 'Show the project page and its information. Access: PM, ADM'
    tags:
      - 'M02: Projects'

  parameters:

```

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

responses:
  '302':
    description: 'Redirect to project page.'
    headers:
      Location:
        schema:
          type: string
        examples:
          302Success:
            description: 'Redirect to Project Page.'
            value: '/project/{id}'
          302Error:
            description: 'Redirect to Homepage.'
            value: '/'

/project/new:
  get:
    operationId: R202
    summary: 'R202: Create New Project Form'
    description: 'Create New Project Form page. Access: USR'
    tags:
      - 'M02: Projects'

    responses:
      '200':
        description: 'Sucess. Create New Project UI is shown'

  post:
    operationId: R203
    summary: 'R203: Create new project action'
    description: 'Create New Project data precessing. Access: USR'

    tags:
      - 'M02'

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

```

responses:
  '302':
    description: 'Redirect after processing the project information.'
    headers:
      Location:
        schema:
          type: string
        examples:
          302Success:
            description: 'Successful project creation. Redirect to project
page.'
            value: '/project/{id}'
          302Failure:
            description: 'Failed to create project. Redirect to project
creation.'
            value: '/project/new'

/project/{id}/task/new:
  get:
    operationId: R204
    summary: 'R204: Create New Task Form'
    description: 'Create a New Task Form. Access: MBR'
    tags:
      - 'M02: Projects'

    responses:
      '200':
        description: 'Ok. Show New Task Ui'

  post:
    operationId: R205
    summary: 'R205: Create new Task'
    description: 'Create a new Task on the specified project. Access: MBR'
    tags:
      - 'M02: Projects'

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

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

```



```
        type: string
      delivery:
        type: string
        format: date
      required:
        - 'name'

responses:
  '302':
    description: 'Redirect to the task page after creating the new task'
    headers:
      Location:
        schema:
          type: string
    examples:
      302Success:
        description: 'Successful task creation. Redirect to task page.'
        value: '/project/{id}/task/{id}'
      302Failure:
        description: 'Failed to create task. Redirect to task creation.'
        value: '/project/new/task/new'

/project/{id}/task/{id}:
  get:
    operationId: R206
    summary: 'R206: View Task Details'
    description: 'Show the Task details page. Access: MBR, ADM'
    tags:
      - 'M02: Projects'

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

    responses:
      '302':
        description: 'Redirect to task page.'
        headers:
          Location:
            schema:
              type: string
        examples:
          302Success:
            description: 'Redirect to Task Page.'
            value: '/project/{id}/task/{id}'
          302Error:
```

```
        description: 'Redirect to Project Page.'
        value: '/project/{id}'

/project/{id}/task/search:
  get:
    operationId: R207
    summary: 'R207: Search tasks'
    description: 'Search tasks within a specific project. Access: MBR'
    tags:
      - 'M02: Projects'
    parameters:
      - in: query
        name: q
        schema:
          type: string
        required: true
    responses:
      '200':
        description: 'Sucess. Task search UI is shown'
      '403':
        description: 'User doesnt have permission'
      '404':
        description: 'Cannot be found'

/project/{id}/task/{id}/edit:
  post:
    operationId: R208
    summary: 'R208: Edit Task Details'
    description: 'Show the edit page. Access: MBR'
    tags:
      - 'M02: Projects'

    requestBody:
      required: true
      content:
        application/x-www-form-urlencoded:
          schema:
            type: object
            properties:
              name:
                type: string
              details:
                type: string
              delivery:
                type: string
              format: date

    responses:
      '302':
        description: 'Redirect after processing the edited task information.'
        headers:
          Location:
            schema:
              type: string
```

```
examples:
  302Success:
    description: 'Successful edit. Redirect to task page.'
    value: '/project/{id}/task/{id}'
  302Failure:
    description: 'Failed edit. Redirect to edit form.'
    value: '/project/{id}/task/{id}/edit'

/project/{id}/add:
  get:
    operationId: R209
    summary: 'R209: Project Member addition Form'
    description: 'Provide the Add New Member Form. Access: COORD'

    tags:
      - 'M02: Projects'

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

    responses:
      '200':
        description: 'Ok. Show the New Member Form'

  post:
    operationId: R210
    summary: 'R210: Process the Member addition Form'
    description: 'Process the Add New Member Form. Access: COORD'

    tags:
      - 'M02: Projects'

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

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

```

responses:
  '302':
    description: 'Redirect to the project board after adding a user'
    headers:
      Location:
        schema:
          type: string
        examples:
          302Success:
            description: 'Successful New Member creation. Redirect to
Project page.'
            value: '/project/{id}'
          302Failure:
            description: 'Failed to create New Member. Redirect to New
Member page.'
            value: '/project/{id}/add'

/project/{id}/task/{id}/complete:
  put:
    operationId: R211
    summary: 'R211: Complete Task'
    description: 'Mark a task as completed. Access: MBR.'

    tags:
      - 'M02: Projects'

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

    responses:
      '200':
        description: 'Task marked as completed'
        content:
          application/json:
            schema:
              type: object
              properties:
                id:
                  type: integer
                name:
                  type: string
                details:
                  type: string
                creation:
                  type: string
                  format: date
                delivery:
                  type: string
                  format: date

```

```

        status:
          type: string
          example: COMPLETED
        creator:
          type: integer
      '403':
        description: 'User doesnt have permission'
      '404':
        description: 'Cannot be found'

```

```

#####
#####
##### M03: Search
#####
#####
#####
#####

```

/project/search:

```

get:
  operationId: R301
  summary: 'R301: Search projects'
  description: 'Search for the users projects. Access: USR'
  tags:
    - 'M03: Search'

```

```

parameters:
  - in: query
    name: q
    schema:
      type: string
    required: true

```

```

responses:
  '200':
    description: 'Sucess. Project search UI is shown'
  '403':
    description: 'User doesnt have permission'
  '404':
    description: 'Cannot be found'

```

```

#####
#####
##### M04: User
Administration and Static pages
#####
#####
#####

```

/admin/users:

```

get:
  operationId: R401
  summary: 'R401: User Administration Area'
  description: 'Administration Area. Access: ADM'
  tags:

```

```
- 'M04: User Administration and Static pages'

responses:
  '200':
    description: 'Sucess. Administration area UI is shown'
  '403':
    description: 'User doesnt have permission'
  '404':
    description: "Not Found."

/faq:
  get:
    operationId: R402
    summary: 'R402: Frequently Asked Questions'
    description: 'Page with frequently asked questions. Access: PUB, USR, ADM'
    tags:
      - 'M04: User Administration and Static pages'

    responses:
      '200':
        description: 'Ok. Show FAQ page'
      '404':
        description: "Not Found."

/aboutus:
  get:
    operationId: R403
    summary: 'R403: About Us'
    description: 'Page with information about us. Access: PUB, USR, ADM'
    tags:
      - 'M04: User Administration and Static pages'

    responses:
      '200':
        description: 'Ok. Show About Us page'
      '404':
        description: "Not Found."

/services:
  get:
    operationId: R404
    summary: 'R404: Services'
    description: 'Services page. Access: PUB, USR, ADM'
    tags:
      - 'M04: User Administration and Static pages'

    responses:
      '200':
        description: 'Ok. Show Services page'
      '404':
        description: "Not Found."
```

A8- Vertical Prototype

The Vertical Prototype includes the implementation of the high priority features marked as necessary (with an asterisk) in the common and theme requirements documents. This artifact aims to validate the architecture presented, also serving to gain familiarity with the technologies used in the project.

1. Implemented Features

1.1. Implemented User Stories

Identifier	Name	Priority	Description
US01	See home	high	As a User, I want to access the home page, so that I can see a brief presentation of the website and all the available options
US02	Create project	high	As a User, I want to create a new project, so that I can manage a new project
US03	View projects	high	As a User, I want to access a list of all the projects I currently work and have worked, so that I can easily navigate through the website
US05	Edit profile	high	As a User I want to modify my profile so that I can make my information up to date
US06	Sign-out	high	As a User, I want to be able to sign out of the system, so that I can stop using my account
US11	Sign-in	high	As a Visitor, I want to authenticate into the system, so that I have access to privileged information
US12	Sign-up	high	As a Visitor, I want to register my account into the system, so that I can authenticate into the system later
US23	View task details	high	As a Project Member, I want to view the details of specific task, so that I can understand better what the task is about
US28	Project details	high	As a Project Member, I want to see the project details of a project, so that I can get more information about the project I am currently working on
US41	User list	high	As an Admin, I want to see a list of all the users registered in the system, so that i can look through all the registered users
US43	Sign-out	high	As a User, I want to be able to sign out of the system, so that I can stop using my account

1.2. Implemented Web Resources

Web Resource Reference	URL
R101: Login Form	GET /login

Web Resource Reference	URL
R103: Logout Action	POST /logout
R104: Register Form	GET /register
R105: Register Action	POST /register
R106: View user profile	GET /profile
R107: Edit user profile	GET /edit-profile
R108: Edit user profile	POST /edit-profile
R109: Home Page	GET /homepage
R201: View project page	GET /project-page
R202: Create New Project Form	GET /add
R203: Create new project action	POST /insert
R206: View Task Details	GET /project-page/{projectId}/task/{taskId}
R401: User Administration Area	GET /homepage

2. Prototype

Link to [site](#)

2.1. Credentials

Email	Password	Position
l.paca@example.com	1234	Admin
bruno.l@example.com	1234	Project Coordinator/Project Member

Revision history

GROUP23156, 25/11/2023

- Alexandre Morais up201906049
- Nuno Ramos up201906051
- Bruno Leal up202008047 (Editor)
- Vitor Bizarro up202007888