EAP: Architecture Specification and Prototype

An online bidding platform destined for car model lovers, allowing them to sell or complete their private collections, by participating in real-time traditional auctions and interacting with other worldwide collectors.

A7: High-level architecture. Privileges. Web resources specification

This artefact presents an overview of the web resources to implement, organized into modules. The permissions used in the modules to establish the conditions of access to resources are also included in this artefact.

This specification adheres to the OpenAPI standard using YAML.

1. Overview

Module	Description
M01: Static pages	Web resources with static content are associated with this module: Home Page, About Us, and FAQ.
M02: Authentication	Web resources associated with user authentication includes: login/logout, registration, password recovery.
M03: Auctions	Web resources associated with auctions, includes: auctions list and search, viewing details and creating new auctions, comments and bids.
M04: Users	Web resources associated with user profile and individual profile management. It features auctions like view user profile, user bids, auctions created, favourite auctions, favourite sellers, users ratings, users rated and view and edit personal information.
M05: Help Messages	Web resources associated with help messages. It features actions like requesting admin help and listing all the help messages.
M06: Reports	Web resources associated with user reports. It features actions like reporting a given user.
M07: Administration	Web resources related to the website administration. It features actions like managing auctions and users, view and answer help messages, list and act on user reports.

2. Permissions

Type	Permission	Description
PUB	Public	Users without privileges
USR	User	Registered users
OWN	Owner	User that are owners of the information
ADM	Administrator	Administrators
SEL	Seller	User that creates an auction

Type	Permission	Description
BUY	Bidder	User that bids in an auction

3. OpenAPI Specification

OpenAPI YAML file

Swagger generated documentation

```
openapi: 3.0.0

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

servers:
- url: http://lbaw2155.lbaw-prod.fe.up.pt/
  description: Production server

externalDocs:
  description: Find more info here.
  url: https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/eap

tags:
  - name: 'M01: Static Pages'
  - name: 'M02: Authentication'
  - name: 'M03: Auctions'
  - name: 'M04: Users'
  - name: 'M05: Help Messages'
  - name: 'M06: Reports'
  - name: 'M07: Administration'

paths:

  /:
    get:
      operationId: R101
      summary: 'R101: View home page'
      description: 'Show homepage and featured auctions. Access: PUB'
      tags:
        - 'M01: Static Pages'

      responses:
        '200':
          description: 'Ok. Show [UI01]
  (https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui01-homepage)'

  /about:
    get:
      operationId: R102
```

```yaml
        summary: 'R102: About Us Page'
        description: 'Show About Us page. Access: PUB'
        tags:
          - 'M01: Static Pages'
        responses:
          '200':
            description: 'Ok. Show [UI02]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui02-about-us)'

  /faqs:
    get:
      operationId: R103
      summary: 'R103: FAQs Page'
      description: 'Show FAQs page. Access: PUB'
      tags:
        - 'M01: Static Pages'
      responses:
        '200':
          description: 'Ok. Show [UI03]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui03-faqs)'

  /login:
    get:
      operationId: R201
      summary: 'R201: Login Form'
      description: 'Provide login form. Access: PUB'
      tags:
        - 'M02: Authentication'
      responses:
        '200':
          description: 'Ok. Show [UI05]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui05-log-in)'

    post:
      operationId: R202
      summary: 'R202: Login Action'
      description: 'Processes the login form submission. Access: PUB'
      tags:
        - 'M02: Authentication'
      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                email:
                  type: string
                password:
                  type: string
                required:
                  - email
                  - password
```

```yaml
      responses:
        '302':
          description: 'Redirect after processing the login credentials.'
          headers:
            Location:
              schema:
                type: string
              examples:
                302Success:
                  description: 'Successful authentication. Redirect to
search page.'
                  value: '/auctions/search'
                302Failure:
                  description: 'Failed authentication. Redirect to login
form.'
                  value: '/login'

  /logout:
    post:
        operationId: R203
        summary: 'R203: Logout Action'
        description: 'Logout the current authenticated user. Access: USR,
ADM'
        tags:
          - 'M02: Authentication'
        responses:
          '302':
            description: 'Redirect after processing logout.'
            headers:
              Location:
                schema:
                  type: string
                examples:
                  302Success:
                    description: 'Successful logout. Redirect to login
form.'
                    value: '/homepage'

  /signup:
    get:
      operationId: R204
      summary: 'R204: Signup Form'
      description: 'Provide new user signup form. Access: PUB'
      tags:
        - 'M02: Authentication'
      responses:
        '200':
          description: 'Ok. Show [UI06]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui06-sign-up)'

    post:
      operationId: R205
      summary: 'R205: Signup Action'
      description: 'Processes the new user signup form submission. Access:
```

```
PUB'
      tags:
        - 'M02: Authentication'

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                name:
                  type: string
                username:
                  type: string
                email:
                  type: string
                password:
                  type: string
                required:
                  - username
                  - 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
search page.'
                  value: '/auctions/search'
                302Failure:
                  description: 'Failed authentication. Redirect to signup
form.'
                  value: '/signup'

  /auctions/search:
    get:
      operationId: R301
      summary: 'R301: View search page'
      description: 'Show the search page with all the auctions. Access:
PUB'
      tags:
        - 'M03: Auctions'

      responses:
        '200':
```

```
        description: 'Ok. Show [UI07]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui07-search)'

  /auctions/{id}:
    get:
      operationId: R302
      summary: 'R302: View auction page'
      description: 'Show the auction details. If the user is SEL, also show
the bid authors, and the bid and buy now options are not available. If the
user is ADM, these options are also not available, and besides seeing the
bid authors, an extra scheduling/cancelling option is shown. Access: PUB'
      tags:
        - 'M03: Auctions'

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

      responses:
        '200':
          description: 'Ok. Show [UI08]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui08-auction-page-
chat)'

  /auctions/{id}/bids:
    get:
      operationId: R303
      summary: 'R303: View auction bid history'
      description: 'View all bids made in the auction. If the user is SEL
or ADM, also show the bid authors. Access: PUB'
      tags:
        - 'M03: Auctions'

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

      responses:
        '200':
          description: 'Ok. Show [UI09]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui09-auction-page-
bid-history)'

    post:
      operationId: R304
      summary: 'R304: Bid in auction'
      description: 'Processes the new bid in the auction. Access: BUY'
      tags:
```

```yaml
        - 'M03: Auctions'

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

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                value:
                  type: number
              required:
                - value

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

  /auctions/{id}/comments:
    get:
      operationId: R305
      summary: 'R305: View all comments in auction'
      description: 'View all comments made in the auction chat. Access:
  PUB'
      tags:
        - 'M03: Auctions'

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

      responses:
        '200':
```

```
              description: 'Ok. Show [UI08]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui08-auction-page-
chat)'

    post:
      operationId: R306
      summary: 'R306: Comment in auction'
      description: 'Processes the new comment in the auction. Access: USR'
      tags:
        - 'M03: Auctions'

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

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

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

  /auctions/{id}/buy_now:
    post:
      operationId: R307
      summary: 'R307: Buy Now in the auction'
      description: 'Processes the use of the Buy Now option in the auction.
Access: BUY'
      tags:
        - 'M03: Auctions'
```

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

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                value:
                  type: number
                required:
                  - value

      responses:
        '302':
          description: 'Redirect after processing buy now action.'
          headers:
            Location:
              schema:
                type: string
              examples:
                302Success:
                  description: 'Successful buy now. Redirect to auction
page.'
                  value: '/auctions/{id}'
                302Failure:
                  description: 'Failed buy now. Redirect to auction page.'
                  value: '/auctions/{id}'

  /auctions/{id}/rate:
    post:
      operationId: R308
      summary: 'R308: Submit rating'
      description: 'Rate a given auction. Access: BUY'
      tags:
        - 'M03: Auctions'

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

      requestBody:
        required: true
        content:
```

```yaml
                application/x-www-form-urlencoded:
                  schema:
                    type: object
                    properties:
                      rating:
                        type: integer
                      text:
                        type: string
                    required:
                      - rating


      responses:
        '302':
          description: 'Redirect after processing rating to auction.'
          headers:
            Location:
              schema:
                type: string
              examples:
                302Success:
                  description: 'Successful rating to auction request.
Redirect to auction page.'
                  value: '/auctions/{auction}'
                302Failure:
                  description: 'Failed rating to auction request. Redirect
to auction page.'
                  value: '/auctions/{auction}'

  /auctions/create:
    get:
      operationId: R309
      summary: 'R309: Create new auction'
      description: 'Provide new auction information form. Access: SEL'
      tags:
        - 'M03: Auctions'
      responses:
        '200':
          description: 'Ok. Show [UI10]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui10-create-
auction-general-info)'

    post:
      operationId: R310
      summary: 'R310: Create new auction Action'
      description: 'Processes the new auction information form submission.
Access: SEL'
      tags:
        - 'M03: Auctions'

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
```

```yaml
                  type: object
                  properties:
                    title:
                      type: string
                    starting_bid:
                      type: number
                    start_date:
                      type: string
                    buy_now:
                      type: number
                    duration:
                      type: integer
                    color:
                      type: string
                    brand:
                      type: string
                    scale:
                      type: string
                    photos:
                      type: array
                      items:
                        type: string
                    description:
                      type: string
                  required:
                    - title
                    - starting_bid
                    - start_date
                    - duration
                    - color
                    - brand
                    - scale
                    - photos
                    - description
        responses:
          '302':
            description: 'Redirect after processing the new auction
  information.'
            headers:
              Location:
                schema:
                  type: string
                examples:
                  302Success:
                    description: 'Successful creation. Redirect to auction
  page.'
                    value: '/auctions/{id}'
                  302Failure:
                    description: 'Failed auction creation. Redirect to create
  auction page.'
                    value: '/auctions/create'

  /auctions/{id}/manage:
    put:
```

```yaml
      operationId: R701
      summary: 'R701: Reschedule/Suspend the auction'
      description: 'Processes the admin action in the auction. Access: ADM'
      tags:
        - 'M07: Administration'

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

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                suspend:
                  type: boolean
                start_date:
                  type: string
                final_date:
                  type: string
      responses:
        '302':
          description: 'Redirect after processing auction management.'
          headers:
            Location:
              schema:
                type: string
              examples:
                302Success:
                  description: 'Successful auction management request. Redirect to auction page.'
                  value: '/auctions/{id}'
                302Failure:
                  description: 'Failed auction management request. Redirect to auction page.'
                  value: '/auctions/{id}'

  /users/{username}:
    get:
      operationId: R401
      summary: 'R401: View user profile'
      description: 'Show the individual user profile. If the user is OWN, also show the personal statistics, bid history and favourite lists. If user is ADM, besides all the user private information, also show a ban option. Access: PUB'
      tags:
        - 'M04: Users'
```

```yaml
      parameters:
        - in: path
          name: username
          schema:
            type: string
          required: true

      responses:
        '200':
          description: 'Ok. Show [UI12]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui12-profile)'

  /users/{username}/edit:
    get:
      operationId: R402
      summary: 'R402: Edit user profile'
      description: 'Edit the user profile information. Access: OWN'
      tags:
        - 'M04: Users'

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

      responses:
        '200':
          description: 'Ok. Show [UI13]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui13-edit-profile)'

    put:
      operationId: R403
      summary: 'R403: Edit Profile Action'
      description: 'Processes the new user profile form submission. Access:
OWN'
      tags:
        - 'M04: Users'

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

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

```yaml
                        name:
                          type: string
                        email:
                          type: string
                        old_password:
                          type: string
                        new_password:
                          type: string
                        photo:
                          type: string
                    required:
                      - old_password
          responses:
            '302':
              description: 'Redirect after processing the updated user
  information.'
              headers:
                Location:
                  schema:
                    type: string
                  examples:
                    302Success:
                      description: 'Successful update. Redirect to profile
  page.'
                      value: '/users/{username}'
                    302Failure:
                      description: 'Failed update. Redirect to edit profile
  form.'
                      value: '/users/edit'

    /users/{username}/bids:
      get:
        operationId: R404
        summary: 'R404: User bid history'
        description: 'List all the bids created by the user. Access: OWN,
  ADM'
        tags:
          - 'M04: Users'

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

        responses:
          '200':
            description: 'Ok. Show [UI14]
  (https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui14-profile-bid-
  history)'

    /users/{username}/auctions:
      get:
```

```
        operationId: R405
        summary: 'R405: Auctions created by the user'
        description: 'List all the auctions created by the user. Access: PUB'
        tags:
          - 'M04: Users'

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

        responses:
          '200':
            description: 'Ok. Show [UI15]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui15-profile-
auctions-created)'

  /users/{username}/fav_auctions:
    get:
      operationId: R406
      summary: 'R406: User favourite auctions'
      description: 'List all the favourite auctions of the user. Access:
OWN'
      tags:
        - 'M04: Users'

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

      responses:
        '200':
          description: 'Ok. Show [UI16]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui16-profile-
favourite-auctions)'

  /users/{username}/fav_auctions/add:
    post:
      operationId: R407
      summary: 'R407: Add favourite auction'
      description: 'Add auction to favourite list. Access: OWN'
      tags:
        - 'M04: Users'

      parameters:
        - in: path
          name: username
          schema:
            type: string
```

```yaml
            required: true

        requestBody:
          required: true
          content:
            application/x-www-form-urlencoded:
              schema:
                type: object
                properties:
                  id:
                    type: integer
                required:
                  - id
      responses:
        '302':
          description: 'Redirect after processing favourite auction.'
          headers:
            Location:
              schema:
                type: string
              examples:
                302Success:
                  description: 'Successful add favourite auction request.
Redirect to auction page.'
                  value: '/auctions/{id}'
                302Failure:
                  description: 'Failed add favourite auction request.
Redirect to auction page.'
                  value: '/auctions/{id}'

  /users/{username}/fav_auctions/remove:
    post:
      operationId: R408
      summary: 'R408: Remove favourite auction'
      description: 'Remove auction from favourite list. Access: OWN'
      tags:
        - 'M04: Users'

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

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

```yaml
                    required:
                      - id
          responses:
            '302':
              description: 'Redirect after processing favourite auction.'
              headers:
                Location:
                  schema:
                    type: string
                  examples:
                    302Success:
                      description: 'Successful remove favourite auction
request. Redirect to auction page.'
                      value: '/auctions/{id}'
                    302Failure:
                      description: 'Failed remove favourite auction request.
Redirect to auction page.'
                      value: '/auctions/{id}'

  /users/{username}/fav_sellers:
    get:
      operationId: R409
      summary: 'R409: User favourite sellers'
      description: 'List all the favourite sellers of the user. Access:
OWN'
      tags:
        - 'M04: Users'

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

      responses:
        '200':
          description: 'Ok. Show [UI17]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui17-profile-
favourite-sellers)'

  /users/{username}/fav_sellers/add:
    post:
      operationId: R410
      summary: 'R410: Add favourite seller'
      description: 'Add seller to favourite list. Access: OWN'
      tags:
        - 'M04: Users'

      parameters:
        - in: path
          name: username
          schema:
            type: string
```

```
            required: true

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

        responses:
          '302':
            description: 'Redirect after processing favourite seller.'
            headers:
              Location:
                schema:
                  type: string
                examples:
                  302Success:
                    description: 'Successful add favourite seller request.
Redirect to profile page.'
                    value: '/users/{seller}'
                  302Failure:
                    description: 'Failed add favourite seller request.
Redirect to profile page.'
                    value: '/users/{seller}'

  /users/{username}/fav_sellers/remove:
    post:
      operationId: R411
      summary: 'R411: Remove favourite seller'
      description: 'Remove seller from favourite list. Access: OWN'
      tags:
        - 'M04: Users'

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

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

```yaml
                                type: string
                    required:
                      - seller

          responses:
            '302':
              description: 'Redirect after processing favourite seller.'
              headers:
                Location:
                  schema:
                    type: string
                  examples:
                    302Success:
                      description: 'Successful remove favourite seller request.
Redirect to profile page.'
                      value: '/users/{seller}'
                    302Failure:
                      description: 'Failed remove favourite seller request.
Redirect to profile page.'
                      value: '/users/{seller}'

  /users/{username}/ratings:
    get:
      operationId: R412
      summary: 'R412: Ratings given to the user'
      description: 'List all the ratings given to the user. Access: PUB'
      tags:
        - 'M04: Users'

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

      responses:
        '200':
          description: 'Ok. Show [UI18]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui18-profile-users-
ratings)'

  /users/{username}/rated:
    get:
      operationId: R413
      summary: 'R413: Ratings given by the user'
      description: 'List all the ratings given by the user. Access: PUB'
      tags:
        - 'M04: Users'

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

```
              type: string
            required: true

        responses:
          '200':
            description: 'Ok. Show [UI19]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui19-profile-users-
rated)'

  /users/{username}/help:
    get:
      operationId: R501
      summary: 'R501: View Help Messages'
      description: 'View the Help Message chat. Access: OWN, ADM'
      tags:
        - 'M05: Help Messages'

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

      responses:
        '200':
          description: 'Ok. Show [UI04]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui04-help)'

    post:
      operationId: R502
      summary: 'R502: Send Help Message'
      description: 'Send a new Help Message in the Help chat. Access: OWN'
      tags:
        - 'M05: Help Messages'

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

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

```yaml
      responses:
        '302':
          description: 'Redirect after processing help message.'
          headers:
            Location:
              schema:
                type: string
              examples:
                302Success:
                  description: 'Successful help message request. Redirect
to help page.'
                  value: '/users/{username}/help'
                302Failure:
                  description: 'Failed help message request. Redirect to
help page.'
                  value: '/users/{username}/help'

  /users/{username}/report:
    post:
      operationId: R601
      summary: 'R601: Submit a Report'
      description: 'Submit a Report to be reviewed by the administrators.
Access: USR'
      tags:
        - 'M06: Reports'

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

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

      responses:
        '200':
          description: 'OK, after processing the report.'

  /users/{username}/manage:
```

```yaml
    put:
      operationId: R702
      summary: 'R702: Suspend the user'
      description: 'Processes the admin action in the user. Access: ADM'
      tags:
        - 'M07: Administration'

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

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                suspend:
                  type: boolean

      responses:
        '302':
          description: 'Redirect after processing user management.'
          headers:
            Location:
              schema:
                type: string
              examples:
                302Success:
                  description: 'Successful user management request.
Redirect to user profile.'
                  value: '/users/{username}'
                302Failure:
                  description: 'Failed user management request. Redirect to
user profile.'
                  value: '/users/{username}'

  /admin/{username}/users:
    get:
      operationId: R703
      summary: 'R703: View Users Admin Panel'
      description: 'View Users Admin Panel. Access: ADM'
      tags:
        - 'M07: Administration'

      parameters:
        - in: path
          name: username
          schema:
            type: string
```

```yaml
                required: true

        responses:
          '200':
            description: 'Ok. Show [UI20]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui20-admin-panel-
users-management)'

  /admin/{username}/auctions:
    get:
      operationId: R704
      summary: 'R704: View Auctions Admin Panel'
      description: 'View Auctions Admin Panel. Access: ADM'
      tags:
        - 'M07: Administration'

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

      responses:
        '200':
          description: 'Ok. Show [UI21]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui21-admin-panel-
auctions-management)'

  /admin/{username}/help:
    get:
      operationId: R705
      summary: 'R705: View Pending Help Messages'
      description: 'View Pending Help Messages from users. Access: ADM'
      tags:
        - 'M07: Administration'

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

      responses:
        '200':
          description: 'Ok. Show [UI23]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui23-admin-panel-
help)'

    post:
      operationId: R503
      summary: 'R503: Send Help Message'
      description: 'Send a new Help Message in the Help chat. Access: ADM'
```

```yaml
      tags:
        - 'M05: Help Messages'

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

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

      responses:
        '302':
          description: 'Redirect after processing help message.'
          headers:
            Location:
              schema:
                type: string
              examples:
                302Success:
                  description: 'Successful help message request. Redirect
to help page.'
                  value: '/admin/{username}/help'
                302Failure:
                  description: 'Failed help message request. Redirect to
help page.'
                  value: '/admin/{username}/help'

  /admin/{username}/reports:
    get:
      operationId: R706
      summary: 'R706: View Pending Reports'
      description: 'View Pending Reports from users. Access: ADM'
      tags:
        - 'M07: Administration'

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

```
            type: string
          required: true

      responses:
        '200':
          description: 'Ok. Show [UI22]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155/-/wikis/er#ui22-admin-panel-
reports)'

###########################################################################
##########################################################

  /api/auctions/featured:
    get:
      operationId: R311
      summary: 'R311: Get all featured auctions'
      description: 'Search through all the featured auctions shown in the
homepage. Access: PUB'
      tags:
        - 'M03: Auctions'

      responses:
        '200':
          description: 'Ok. Show featured auctions'
          content:
            application/json:
              schema:
                type: array
                items:
                  type: object
                  properties:
                    id:
                      type: integer
                    title:
                      type: string
                    final_date:
                      type: string
                    highest_bid:
                      type: number
                    buy_now:
                      type: number
                example:
                  - id: 1
                    title: 'Ferrari Portofino'
                    final_date: '2021-04-25 12:00:00'
                    highest_bid: 500
                    buy_now: 2000
                  - id: 4
                    title: 'Bentley Continental'
                    final_date: '2021-04-26 14:50:00'
                    highest_bid: 650
                    buy_now: 1950

  /api/auctions/search:
```

```
      get:
        operationId: R312
        summary: 'R312: Get search results'
        description: 'Search through all the auctions. Access: PUB'
        tags:
          - 'M03: Auctions'

        parameters:
          - in: query
            name: query
            description: 'String to use for full-text search'
            schema:
              type: string
            required: false
          - in: query
            name: sort_by
            description: 'Sort by Time Remaining, Last Bid, or Buy Now'
            schema:
              type: string
            required: false
          - in: query
            name: buy_now
            description: 'Boolean to search only auctions with buy now
  option'
            schema:
              type: boolean
            required: false
          - in: query
            name: ended_auctions
            description: 'Boolean to only show ended auctions'
            schema:
              type: boolean
            required: false
          - in: query
            name: color
            description: 'Filter by color name'
            schema:
              type: string
            required: false
          - in: query
            name: brand
            description: 'Filter by brand name'
            schema:
              type: string
            required: false
          - in: query
            name: scale
            description: 'Filter by scale of the model'
            schema:
              type: string
            required: false
          - in: query
            name: seller
            description: 'Filter by seller name'
```

```
            schema:
              type: string
            required: false
        - in: query
          name: min_bid
          description: 'Only show auctions with last bids whose value is
above the minimum'
            schema:
              type: number
            required: false
        - in: query
          name: max_bid
          description: 'Only show auctions with last bids whose value is
below the maximum'
            schema:
              type: number
            required: false
        - in: query
          name: min_buy_now
          description: 'Only show auctions with buy now value above the
minimum'
            schema:
              type: number
            required: false
        - in: query
          name: max_buy_now
          description: 'Only show auctions with buy now value below the
maximum'
            schema:
              type: number
            required: false

      responses:
        '200':
          description: 'Ok. Show auctions'
          content:
            application/json:
              schema:
                type: array
                items:
                  type: object
                  properties:
                    id:
                      type: integer
                    image_url:
                      type: string
                    title:
                      type: string
                    final_date:
                      type: string
                    highest_bid:
                      type: number
                    buy_now:
                      type: number
```

```
                              seller:
                                type: string
                              seller_rating:
                                type: number
                        example:
                          - id: 1
                            image_url: 'https://lbaw2155-
piu/static/images/qkewndms-qqnw-213-skmsmsak.jpg'
                            title: 'Ferrari Portofino'
                            final_date: '2021-04-25 12:00:00'
                            highest_bid: 500
                            buy_now: 2000
                            seller: 'johndoe'
                            seller_rating: 4.8
                          - id: 4
                            image_url: 'https://lbaw2155-
piu/static/images/otituvnc-qoqo-345-mekwkwkw.jpg'
                            title: 'Bentley Continental'
                            final_date: '2021-04-26 14:50:00'
                            highest_bid: 650
                            buy_now: 1950
                            seller: 'rickwheels'
                            seller_rating: 4.2

  /api/auctions/{id}:
    get:
      operationId: R313
      summary: 'R313: View auction details'
      description: 'Show the auction details. Access: PUB'
      tags:
        - 'M03: Auctions'

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

      responses:
        '200':
          description: 'Ok. Show auction details'
          content:
            application/json:
              schema:
                type: array
                items:
                  type: object
                  properties:
                    title:
                      type: string
                    seller:
                      type: string
                    colour:
```

```yaml
                          type: string
                        brand:
                          type: string
                        scale:
                          type: string
                        description:
                          type: string
                        final_date:
                          type: string
                        highest_bid:
                          type: number
                        buy_now:
                          type: number
                  example:
                    - title: "Ferrari Portofino"
                      seller: "johndoe"
                      colour: "Yellow"
                      brand: "Ferrari"
                      scale: "18:1"
                      description: "lorem ipsum description dusty rusty
busty"
                      final_date: "2021-04-23 12:39:41"
                      highest_bid: 1345.12
                      buy_now: 2000

  /api/auctions/{id}/bids:
    get:
      operationId: R314
      summary: 'R314: View auction bid history'
      description: 'View all bids made in the auction. Access: PUB'
      tags:
        - 'M03: Auctions'

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

      responses:
        '200':
          description: 'Ok. Show auction bid history'
          content:
            application/json:
              schema:
                type: array
                items:
                  type: object
                  properties:
                    date:
                      type: string
                    value:
                      type: number
```

```yaml
                      example:
                        - date: "2021-04-23 12:39:41"
                          value: 1345.12
                        - date: "2021-04-23 12:39:55"
                          value: 1369.12

    post:
      operationId: R315
      summary: 'R315: Bid in auction'
      description: 'Processes the new bid in the auction. Access: BUY'
      tags:
        - 'M03: Auctions'

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

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                value:
                  type: number
              required:
                - value

      responses:
        '200':
          description: 'OK, after processing the new bid.'
          content:
            application/json:
              schema:
                type: object
                properties:
                  result:
                    type: string
                example:
                  - result: 'success'

  /api/auctions/{id}/comments:
    get:
      operationId: R316
      summary: 'R316: View all comments in auction'
      description: 'View all comments made in the auction chat. Access:
  PUB'
      tags:
        - 'M03: Auctions'
```

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

        responses:
          '200':
            description: 'Ok. Show all comments'
            content:
              application/json:
                schema:
                  type: array
                  items:
                    type: object
                    properties:
                      username:
                        type: string
                      text:
                        type: string
                      date:
                        type: string
                  example:
                    - username: 'johndoe'
                      text: 'Bulish'
                      date: '2021-04-12 12:39:41'
                    - username: 'sophydoors'
                      text: 'Not Interest anymore in this piece of rubish'
                      date: '2021-04-12 12:39:41'

    post:
      operationId: R317
      summary: 'R317: Comment in auction'
      description: 'Processes the new comment in the auction. Access: USR'
      tags:
        - 'M03: Auctions'

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

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

```yaml
                    required:
                      - text

        responses:
          '200':
            description: 'OK, after processing the new comment.'
            content:
              application/json:
                schema:
                  type: object
                  properties:
                    result:
                      type: string
                  example:
                    - result: 'success'

  /api/auctions/{id}/buy_now:
    post:
      operationId: R318
      summary: 'R318: Buy Now in the auction'
      description: 'Processes the use of the Buy Now option in the auction.
Access: BUY'
      tags:
        - 'M03: Auctions'

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

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                value:
                  type: number
              required:
                - value

      responses:
        '200':
          description: 'OK, after processing the buy now option.'
          content:
            application/json:
              schema:
                type: object
                properties:
                  result:
                    type: string
```

```yaml
                    example:
                      - result: 'success'

  /api/auctions/{id}/rate:
    post:
      operationId: R319
      summary: 'R319: Submit rating'
      description: 'Rate a given auction. Access: BUY'
      tags:
        - 'M03: Auctions'

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

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                rating:
                  type: integer
                text:
                  type: string
              required:
                - rating

      responses:
        '200':
          description: 'OK, after processing the rating.'
          content:
            application/json:
              schema:
                type: object
                properties:
                  result:
                    type: string
                example:
                  - result: 'success'

  /api/auctions/create:
    post:
      operationId: R320
      summary: 'R320: Create new auction Action'
      description: 'Processes the new auction information. Access: SEL'
      tags:
        - 'M03: Auctions'

      requestBody:
```

```yaml
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                title:
                  type: string
                starting_bid:
                  type: number
                start_date:
                  type: string
                buy_now:
                  type: number
                duration:
                  type: integer
                color:
                  type: string
                brand:
                  type: string
                scale:
                  type: string
                photos:
                  type: array
                  items:
                    type: string
                description:
                  type: string
              required:
                - title
                - starting_bid
                - start_date
                - duration
                - color
                - brand
                - scale
                - photos
                - description

      responses:
        '200':
          description: 'OK, after processing the auction creation.'
          content:
            application/json:
              schema:
                type: object
                properties:
                  result:
                    type: string
                example:
                  - result: 'success'

  /api/auctions/{id}/manage:
    put:
```

```yaml
      operationId: R707
      summary: 'R707: Reschedule/Suspend the auction'
      description: 'Processes the admin action in the auction. Access: ADM'
      tags:
        - 'M07: Administration'

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

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                suspend:
                  type: boolean
                start_date:
                  type: string
                final_date:
                  type: string

      responses:
        '200':
          description: 'OK, after processing the auction management.'
          content:
            application/json:
              schema:
                type: object
                properties:
                  result:
                    type: string
                example:
                  - result: 'success'

  /api/colours:
   get:
      operationId: R321
      summary: 'R321: Available Colours'
      description: 'View all available colour values. Access: PUB'
      tags:
        - 'M03: Auctions'

      responses:
        '200':
          description: 'Ok. Show all colour values'
          content:
            application/json:
              schema:
```

```yaml
                 type: array
                 items:
                   type: object
                   properties:
                     colour:
                       type: string
                 example:
                   - colour: 'Yellow'
                   - colour: 'Red'


  /api/brands:
   get:
      operationId: R322
      summary: 'R322: Available Brands'
      description: 'View all available brand values. Access: PUB'
      tags:
        - 'M03: Auctions'


      responses:
        '200':
          description: 'Ok. Show all brand values'
          content:
            application/json:
              schema:
                type: array
                items:
                  type: object
                  properties:
                    brand:
                      type: string
                example:
                   - brand: 'Ferrari'
                   - brand: 'Toyota'

  /api/scales:
   get:
      operationId: R323
      summary: 'R323: Available Scales'
      description: 'View all available scale values. Access: PUB'
      tags:
        - 'M03: Auctions'


      responses:
        '200':
          description: 'Ok. Show all scale values'
          content:
            application/json:
              schema:
                type: array
                items:
                  type: object
                  properties:
                    scale:
                       type: string
```

```yaml
                        example:
                          - scale: '18:1'
                          - scale: '24:1'

  /api/users/{username}:
    get:
      operationId: R414
      summary: 'R414: View user profile'
      description: 'Show the individual user profile. If the user is OWN,
also show the personal statistics, bid history and favourite lists. If user
is ADM, besides all the user private information, also show a ban option.
Access: PUB'
      tags:
        - 'M04: Users'

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

      responses:
        '200':
          description: 'Ok. Show user profile information'
          content:
            application/json:
              schema:
                type: object
                properties:
                  username:
                    type: string
                  name:
                    type: string
                  email:
                    type: string
                  rating:
                    type: number

  /api/users/{username}/edit:
    put:
      operationId: R415
      summary: 'R415: Edit Profile Action'
      description: 'Processes the new user profile form submission. Access:
OWN'
      tags:
        - 'M04: Users'

      parameters:
        - in: path
          name: username
          schema:
            type: string
          required: true
```

```
        requestBody:
          required: true
          content:
            application/x-www-form-urlencoded:
              schema:
                type: object
                properties:
                  name:
                    type: string
                  email:
                    type: string
                  old_password:
                    type: string
                  new_password:
                    type: string
                  photo:
                    type: string
                required:
                  - old_password
      responses:
        '200':
          description: 'OK, after processing the profile edit.'
          content:
            application/json:
              schema:
                type: object
                properties:
                  result:
                    type: string
                example:
                  - result: 'success'

  /api/users/{username}/bids:
    get:
      operationId: R416
      summary: 'R416: User bid history'
      description: 'List all the bids created by the user. Access: OWN,
ADM'
      tags:
        - 'M04: Users'

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

      responses:
        '200':
          description: 'Ok. Show Bids'
          content:
            application/json:
```

```
                    schema:
                      type: array
                      items:
                        type: object
                        properties:
                          auction_id:
                            type: number
                          value:
                            type: number

  /api/users/{username}/auctions:
    get:
      operationId: R417
      summary: 'R417: Auctions created by the user'
      description: 'List all the auctions created by the user. Access: PUB'
      tags:
        - 'M04: Users'

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

      responses:
        '200':
          description: 'Ok. Show Auctions'
          content:
            application/json:
              schema:
                type: array
                items:
                  type: object
                  properties:
                    id:
                      type: string
                    title:
                      type: string

  /api/users/{username}/fav_auctions:
    get:
      operationId: R418
      summary: 'R418: User favourite auctions'
      description: 'List all the favourite auctions of the user. Access:
OWN'
      tags:
        - 'M04: Users'

      parameters:
        - in: path
          name: username
          schema:
            type: string
```

```
                required: true

        responses:
          '200':
            description: 'Ok. Show favourite auctions'
            content:
              application/json:
                schema:
                  type: array
                  items:
                    type: object
                    properties:
                      id:
                        type: integer
                      title:
                        type: string
                      photo:
                        type: string
                  example:
                    - id: 1
                      title: 'Ferrari Portofino'
                      photo: 'https://lbaw2155-piu/static/images/qkewndms-
qqnw-213-skmsmsak.jpg'
                    - id: 4
                      title: 'Bentley Continental'
                      photo: 'https://lbaw2155-piu/static/images/otituvnc-
qoqo-345-mekwkwkw.jpg'

  /api/users/{username}/fav_auctions/add:
    post:
      operationId: R419
      summary: 'R419: Add favourite auction'
      description: 'Add auction to favourite list. Access: OWN'
      tags:
        - 'M04: Users'

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

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

```
        responses:
          '200':
            description: 'OK, after processing the add to favourite action.'
            content:
              application/json:
                schema:
                  type: object
                  properties:
                    result:
                      type: string
                  example:
                    - result: 'success'

  /api/users/{username}/fav_auctions/remove:
    post:
      operationId: R420
      summary: 'R420: Remove favourite auction'
      description: 'Remove auction from favourite list. Access: OWN'
      tags:
        - 'M04: Users'

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

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                id:
                  type: integer
              required:
                - id

      responses:
        '200':
          description: 'OK, after processing the remove from favourite
  action.'
          content:
            application/json:
              schema:
                type: object
                properties:
                  result:
                    type: string
                example:
                  - result: 'success'
```

```
  /api/users/{username}/fav_sellers:
    get:
      operationId: R421
      summary: 'R421: User favourite sellers'
      description: 'List all the favourite sellers of the user. Access:
OWN'
      tags:
        - 'M04: Users'

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

      responses:
        '200':
          description: 'Ok. Show favourite sellers'
          content:
            application/json:
              schema:
                type: array
                items:
                  type: object
                  properties:
                    username:
                      type: string
                    photo:
                      type: string
                  example:
                    - username: 'johndoe'
                      photo: 'https://lbaw2155-piu/static/images/mdkjeam-
skfjhejs.jpg'
                    - username: 'rickwheels'
                      photo: 'https://lbaw2155-piu/static/images/okqiela-
grsusnre.jpg'

  /api/users/{username}/fav_sellers/add:
    post:
      operationId: R422
      summary: 'R422: Add favourite seller'
      description: 'Add seller to favourite list. Access: OWN'
      tags:
        - 'M04: Users'

      parameters:
        - in: path
          name: username
          schema:
            type: string
          required: true
```

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

      responses:
        '200':
          description: 'OK, after processing the add to favourite action.'
          content:
            application/json:
              schema:
                type: object
                properties:
                  result:
                    type: string
                example:
                  - result: 'success'

  /api/users/{username}/fav_sellers/remove:
    post:
      operationId: R423
      summary: 'R423: Remove favourite seller'
      description: 'Remove seller from favourite list. Access: OWN'
      tags:
        - 'M04: Users'

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

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

      responses:
        '200':
```

```yaml
              description: 'OK, after processing the remove from favourite
   action.'
              content:
                application/json:
                  schema:
                    type: object
                    properties:
                      result:
                        type: string
                    example:
                      - result: 'success'

   /api/users/{username}/ratings:
     get:
       operationId: R424
       summary: 'R424: Ratings given to the user'
       description: 'List all the ratings given to the user. Access: PUB'
       tags:
         - 'M04: Users'

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

       responses:
         '200':
           description: 'Ok. Show Ratings'
           content:
             application/json:
               schema:
                   type: array
                   items:
                     type: object
                     properties:
                       username:
                         type: string
                       description:
                         type: string
                       value:
                         type: number

   /api/users/{username}/rated:
     get:
       operationId: R425
       summary: 'R425: Ratings given by the user'
       description: 'List all the ratings given by the user. Access: PUB'
       tags:
         - 'M04: Users'

       parameters:
         - in: path
```

```
              name: username
              schema:
                type: string
              required: true

        responses:
          '200':
            description: 'Ok. Show Ratings'
            content:
              application/json:
                schema:
                    type: array
                    items:
                      type: object
                      properties:
                        username:
                          type: string
                        description:
                          type: string
                        value:
                          type: number

  /api/users/{username}/notifications:
    get:
      operationId: R426
      summary: 'R426: View Pending Notifications'
      description: 'View the Pending Notifications list. Access: OWN'
      tags:
        - 'M04: Users'

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

      responses:
        '200':
          description: 'Ok. Show Pending Notifications'
          content:
            application/json:
              schema:
                type: array
                items:
                  type: object
                  properties:
                    text:
                      type: string
                    date:
                      type: string
                  example:
                    - text: "johndoe created a new auction! Go check it out"
                      date: "2021-04-23 12:39:41"
```

```yaml
                      - text: "Auction #314 is over! View the results"
                        date: "2021-04-23 12:59:24"

  /api/users/{username}/help:
    get:
      operationId: R504
      summary: 'R504: View Help Messages'
      description: 'View the Help Messages list. Access: OWN, ADM'
      tags:
        - 'M05: Help Messages'

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

      responses:
        '200':
          description: 'Ok. Show Help Messages'
          content:
            application/json:
              schema:
                type: array
                items:
                  type: object
                  properties:
                    sender:
                      type: string
                    text:
                      type: string
                    date:
                      type: string
                  example:
                    - sender: 'johndoe'
                      text: "Will I be notified about my favourite seller?"
                      date: "2021-04-23 12:39:41"
                    - sender: 'rickwheels'
                      text: "Yes, you should be notified everytime a
  favourite seller of yours creates a new auction."
                      date: "2021-04-23 12:59:24"

    post:
      operationId: R505
      summary: 'R505: Send Help Message'
      description: 'Send a new Help Message. Access: OWN'
      tags:
        - 'M05: Help Messages'

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

```yaml
                type: string
              required: true

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

        responses:
          '200':
            description: 'OK, after processing the help message.'
            content:
              application/json:
                schema:
                  type: object
                  properties:
                    result:
                      type: string
                  example:
                    - result: 'success'

  /api/users/{username}/report:
    post:
      operationId: R602
      summary: 'R602: Submit a Report'
      description: 'Submit a Report to be reviewed by the administrators.
 Access: USR'
      tags:
        - 'M06: Reports'

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

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

```yaml
                  context:
                    type: string
                  text:
                    type: string
                required:
                  - context
                  - text

      responses:
        '200':
          description: 'OK, after processing the report.'
          content:
            application/json:
              schema:
                type: object
                properties:
                  result:
                    type: string
                example:
                  - result: 'success'

  /api/users/{username}/manage:
    put:
      operationId: R708
      summary: 'R708: Suspend the user'
      description: 'Processes the admin action in the user. Access: ADM'
      tags:
        - 'M07: Administration'

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

      requestBody:
        required: true
        content:
          application/x-www-form-urlencoded:
            schema:
              type: object
              properties:
                suspend:
                  type: boolean

      responses:
        '200':
          description: 'OK, after processing the user management.'
          content:
            application/json:
              schema:
                type: object
                properties:
```

```yaml
                       result:
                         type: string
                     example:
                       - result: 'success'

    /api/admin/{username}/help:
      get:
        operationId: R709
        summary: 'R709: View Pending Help Messages'
        description: 'View Pending Help Messages from users. Access: ADM'
        tags:
          - 'M07: Administration'

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

        responses:
          '200':
            description: 'Ok. Show Help Messages'
            content:
              application/json:
                schema:
                  type: array
                  items:
                    type: object
                    properties:
                      sender:
                        type: string
                      text:
                        type: string
                      date:
                        type: string
                  example:
                    - sender: 'johndoe'
                      text: "Will I be notified about my favourite seller?"
                      date: "2021-04-23 12:39:41"
                    - sender: 'rickwheels'
                      text: "Yes, you should be notified everytime a
  favourite seller of yours creates a new auction."
                      date: "2021-04-23 12:59:24"

      post:
        operationId: R506
        summary: 'R506: Send Help Message'
        description: 'Send a new Help Message to a given user. Access: ADM'
        tags:
          - 'M05: Help Messages'

        parameters:
          - in: path
```

```yaml
            name: username
            schema:
              type: string
            required: true

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

      responses:
        '200':
          description: 'OK, after processing the help message.'
          content:
            application/json:
              schema:
                type: object
                properties:
                  result:
                    type: string
                example:
                  - result: 'success'

  /api/admin/{username}/reports:
    get:
      operationId: R710
      summary: 'R710: View Pending Reports'
      description: 'View Pending Reports from users. Access: ADM'
      tags:
        - 'M07: Administration'

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

      responses:
        '200':
          description: 'Ok. Show Reports'
          content:
            application/json:
              schema:
```

```
                type: array
                items:
                  type: object
                  properties:
                    reporter:
                      type: string
                    context:
                      type: string
                    reason:
                      type: string
                example:
                  - reporter: 'rickwheels'
                    context: "Auction #993"
                    reason: "This guy is trying to sell a fake fiat model!
  Stop it!!"
```

A8: Vertical Prototype

The prototype developed in this artefact includes the implementation of some user stories to validate the architecture defined and learn the usage of the technologies required by this project. It includes the implementation of pages of visualization and the possibility to interact with some functionalities. Besides this, the access control of the website pages is also implemented, along with a presentation of the error and success messages.

1. Implemented Features

1.1. Implemented User Strories

User Story reference	Name	Priority	Description
US001	See Home	High	As a User, I want to access the website homepage, so that I can have an overview of the ongoing auctions and links for the other pages.
US002	Advanced Search	High	As a User, I want to search for all the public information, so that I can filter the auctions by the highest bids, the creation date, the car model brand, scale, colour, seller, or the remaining time.
US003	Auction Page	High	As a User, I want to be able to see an auction's information, so that I can know more about the car model being sold.
US004	See About Us	Medium	As a User, I want to access the About Us page, so that I can see a complete website's description.
US005	Profile Page	Medium	As a User, I want to see the profile page of another user, so that I can search all the auctions from this chosen user.

User Story reference	Name	Priority	Description
US006	FAQ Page	Low	As a User, I want to access the FAQ, so that I can see Frequently Asked Questions about the website.
US101	Sign-In	High	As a Visitor, I want to log in to the system, so that I can access privileged features.
US102	Sign-Up	High	As a Visitor, I want to register myself into the system, so that I can store all my data in a personal account.
US300	Profile Page	High	As a Registered User, I want to have a profile page, so that I can view and update my personal information, favourites, and statistics.
US301	Logout	High	As a Registered User, I want to logout, so that I can leave the system.
US401	Create an Auction	High	As a Seller, I want to create an auction, so that I can sell a model car.
US403	"Buy Now" Option	Low	As a Seller, I want to have the option to set a "Buy Now" price for the auction, so that I can give the opportunity to sell the car model instantaneously.
US501	Bid in a given auction	High	As a Bidder, I want to bid in a given auction, so that I can try to buy the given model car.
US503	Comment an auction	Low	As a Bidder, I want to write a comment in an ongoing auction, so that the other users can be informed of my interest.

1.2. Implemented Web Resources

Module M01: Static pages

Web Resource Reference	URL
R101: View home page	/
R102: About Us Page	/about
R103: FAQs Page	/faqs

Module M02: Authentication

Web Resource Reference	URL
R201: Login Form	/login
R202: Login Action	POST /login

Web Resource Reference	URL
R203: Logout Action	POST /logout
R204: Signup Form	/register
R205: Signup Action	POST /register

Module M03: Auctions

Web Resource Reference	URL
R301: View search page	/auctions/search
R302: View auction page	/auctions/{id}
R304: Bid in auction	POST /auctions/{id}/bids
R309: Create new auction	/auctions/create
R310: Create new auction Action	POST /auctions/create
R311: Get all featured auctions	GET /api/auctions/featured
R312: Get search results	GET /api/auctions/search
R314: View auction bid history	GET /api/auctions/{id}/bids
R316: View all comments in auction	GET /api/auctions/{id}/comments
R317: Comment in auction	POST /api/auctions/{id}/comments
R321: Available Colours	GET /api/colours
R322: Available Brands	GET /api/brands
R323: Available Scales	GET /api/scales
R323: Available Sellers	GET /api/sellers

Module M04: Users

Web Resource Reference	URL
R401: View user profile	/users/{username}
R416: User bid history	GET /api/users/{username}/bids
R417: Auctions created by the user	GET /api/users/{username}/auctions
R418: User Favourite Auctions	GET /api/users/{username}/fav_auctions
R421: User Favourite Sellers	GET /api/users/{username}/fav_sellers
R424: Ratings given to the user	GET /api/users/{username}/ratings
R425: Ratings given by the user	GET /api/users/{username}/rated

2. Prototype

The prototype is available at http://lbaw2155.lbaw-prod.fe.up.pt/

Credentials:

- regular user: aflowerden0@posterous.com/aflowerden0
- regular user: rkemmey1x@homestead.com/rkemmey1x
- regular user: fbrauned@cam.ac.uk/fbrauned

The code is available at https://git.fe.up.pt/lbaw/lbaw2021/lbaw2155