

EAP: Architecture Specification and Prototype

Our website aims to help customers get what they need when they need it during these troubling times with an enjoyable browsing experience.

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

This artifact intends to document the catalogue of resources and the properties of each resource available to all users. The artifact contains operations over data such as: create, delete, update and read.

1. Overview

Module Name	Module Description
M01: Authentication and profile	Web resources associated with user authentication and profile management. Includes the following system features: login/logout, registration, credential recovery, view and edit personal profile information.
M02: Products and categories	Web resources associated with the searching, filtering and listing of all products and categories available to the user.
M03: Management	Web resources associated with website management, such as: promote and ban users, add, view, edit and remove item listings, delete user comments.
M04: Static pages	Web resources associated with static pages, such as: FAQ, About and Contacts.
M05: Products and reviews	Web resources associated with products and reviews. Includes system features: Add, edit and remove reviews, and see product rating.
M06: Wishlist and cart	Web resources associated with cart and wishlist actions. Includes system features such as: View, delete and checkout cart and view, add and delete to cart and wishlist

2. Permissions

PUB	Public	Group of users without privileges
USR	User	Authenticated user
OWN	Owner	Group of users who own something (e.g. own profile)
ADM	Administrator	Group of administrators

3. OpenAPI Specification

Link to the Swagger generated documentation (<https://app.swaggerhub.com/apis/LBAW-FEUP-11/lbaw-fneuc-web-api/1.0>).

Link to the OpenAPI specification file in the repository: [a7_openapi](#).

```
openapi: 3.0.0

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

servers:
  # Added by API Auto Mocking Plugin
  - description: SwaggerHub API Auto Mocking
    url: https://virtserver.swaggerhub.com/LBAW-FEUP-11/LBAW-FNEUC/1.0
  - url: http://lbaw2111.lbaw-prod.fe.up.pt/
    description: Production server

externalDocs:
  description: Find more info here.
  url: https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/home

tags:
  - name: 'M01: Authentication and profile'
  - name: 'M02: Products and categories'
  - name: 'M03: Management'
  - name: 'M04: Static Pages'
  - name: 'M05: Products and reviews'
  - name: 'M06: Wishlist and cart'

paths:
  /login:
    get:
      operationId: R101
      summary: 'R101: Login Form'
      description: 'Provide Login form. Access: PUB'
      tags:
        - 'M01: Authentication and profile'
      responses:
        '200':
          description: 'ok. Show [UI11]'
          (https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui11-sign-in)
    post:
      operationId: R102
      summary: 'R102: Login Action'
      description: 'Processes the Login form submission. Access: PUB'
      tags:
        - 'M01: Authentication and profile'

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

```

    schema:
      type: object
      properties:
        username:      # <!-- form field name
          type: string
        password:      # <!-- form field name
          type: string
      required:
        - username
        - password

  responses:
    '302':
      description: 'Redirect after processing the login credentials.'
      headers:
        Location:
          schema:
            type: string
          examples:
            302Success:
              description: 'Successful authentication. Redirect to
mainpage.'
              value: '/mainpage'
            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 profile'
    responses:
      '302':
        description: 'Redirect after processing logout.'
        headers:
          Location:
            schema:
              type: string
            examples:
              302Success:
                description: 'Successful logout. Redirect to mainpage.'
                value: '/mainpage'

/register:
  get:
    operationId: R104
    summary: 'R104: Register Form'
    description: 'Provide new user register form. Access: PUBLIC'
    tags:
      - 'M01: Authentication and profile'
    responses:
      '200':
        description: 'Ok. Show [UI12]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui12-sign-up)'

```

```

post:
  operationId: R105
  summary: 'R105: Register Action'
  description: 'Processes the new user register form submission. Access:
PUB'
  tags:
    - 'M01: Authentication and profile'

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

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

/userProfile/{id}/edit:

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

```

```

get:
  operationId: R106
  summary: 'R106: Edit Profile Form'
  description: 'Provide edit profile form. Access: USR'
  tags:
    - 'M01: Authentication and profile'
  responses:
    '200':
      description: 'Ok. Show [UI13]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui13-user-profile)'

patch:
  operationId: R107
  summary: 'R107: Edit Profile Action'
  description: 'Processes the edit profile form submission. Access: USR'
  tags:
    - 'M01: Authentication and profile'

requestBody:
  required: true
  content:
    application/x-www-form-urlencoded:
      schema:
        type: object
        properties:
          username:
            type: string
          email:
            type: string
          firstName:
            type: string
          lastName:
            type: string
          password:
            type: string
          picture:
            type: string
            format: binary
          address:
            type: object
            properties:
              zip-code:
                type: string
              street:
                type: string
              city:
                type: string
              country:
                type: string

  responses:
    '302':
      description: 'Redirect after processing the new user information.'
      headers:
        Location:
          schema:
            type: string

```

```

examples:
  302Success:
    description: 'Successful edit. Redirect to user profile.'
    value: '/userProfile/{id}'
  302Failure:
    description: 'Failed edit. Redirect to user profile.'
    value: '/userProfile/{id}'

/credentialRecovery:
  get:
    operationId: R108
    summary: 'R108: Credential Recovery Form'
    description: 'Provide credential recovery form. Access: PUB'
    tags:
      - 'M01: Authentication and profile'
    responses:
      '200':
        description: 'NOT YET DONE!!!!!!!!!!!!!!'

  post:
    operationId: R109
    summary: 'R109: Credential Recovery Action'
    description: 'Processes the credential recovery form submission. Access:
PUB'
    tags:
      - 'M01: Authentication and profile'

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

    responses:
      '302':
        description: 'Redirect after processing the credential recovery
information.'
        headers:
          Location:
            schema:
              type: string
            examples:
              302Success:
                description: 'Successful credential recovery. Redirect to
login.'
                value: '/login'

/userProfile/{id}:
  get:
    operationId: R110
    summary: 'R110: View user profile'
    description: 'Show the individual user profile. Access: OWN, ADM'

```

```

tags:
  - 'M01: Authentication and profile'

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

responses:
  '200':
    description: 'Ok. Show [UI13]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui13-user-profile)'

delete:
  operationId: R111
  summary: 'R111: Delete account Action'
  description: 'Processes the delete account action. Access: OWN'
  tags:
    - 'M01: Authentication and profile'

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

responses:
  '302':
    description: 'Redirect after processing the account deletion.'
    headers:
      Location:
        schema:
          type: string
        examples:
          302Success:
            description: 'Successful deletion. Redirect to main page.'
            value: '/mainpage'
          302Error:
            description: 'Failed deletion. Redirect to user profile page.'
            value: '/userProfile/{id}'

/userProfile/{id}/billingAddress:
  post:
    operationId: R112
    summary: 'R112: Update billing address'
    description: 'AJAX request. Update the user's billing address. Access:
OWN'
    tags:
      - 'M01: Authentication and profile'

parameters:
  - in: path
    name: id
    description: User identifier

```

```

    schema:
      type: integer
      required: true

requestBody:
  required: true
  content:
    application/x-www-form-urlencoded:
      schema:
        type: object
        properties:
          street:
            type: string
          country:
            type: string
          zip_code:
            type: string
          city:
            type: string

responses:
  '200':
    description: 'Address updated successfully.'
    content:
      application/json:
        schema:
          type: object
          properties:
            street:
              type: string
            country:
              type: string
            zip_code:
              type: string
            city:
              type: string

        example:
          street: 'Washington Avenue'
          county: 'USA'
          zip_code: '124231'
          city: 'Washington DC'

/userProfile/{id}/shippingAddress:
  post:
    operationId: R113
    summary: 'R113: Update shipping address'
    description: 'AJAX request. Update the user''s shipping address. Access:
OWN'
    tags:
      - 'M01: Authentication and profile'

    parameters:
      - in: path
        name: id
        description: User identifier
        schema:
          type: integer

```



```

        required: true

requestBody:
  required: true
  content:
    application/x-www-form-urlencoded:
      schema:
        type: object
        properties:
          street:
            type: string
          country:
            type: string
          zip_code:
            type: string
          city:
            type: string

responses:
  '200':
    description: 'Address updated successfully.'
    content:
      application/json:
        schema:
          type: object
          properties:
            street:
              type: string
            country:
              type: string
            zip_code:
              type: string
            city:
              type: string

        example:
          street: 'Washington Avenue'
          county: 'USA'
          zip_code: '124231'
          city: 'Washington DC'

/userProfile/{id}/purchaseHistory:
  get:
    operationId: R114
    summary: 'R114: View user's purchase history'
    description: 'Show the individual user purchase history. Access: OWN, ADM'
    tags:
      - 'M01: Authentication and profile'

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

    responses:
      '200':

```

```
description: 'Ok. Show [UI09]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui09-purchase-history)'
```

```
/api/items:
```

```
get:
```

```
operationId: R201
```

```
summary: 'R201: Search products API'
```

```
description: 'Searches for products and returns the results as JSON.'
```

```
Access: PUB.'
```

```
tags:
```

```
- 'M02: Products and categories'
```

```
parameters:
```

```
- in: query
```

```
name: query
```

```
description: String to use for full-text search
```

```
schema:
```

```
type: string
```

```
required: false
```

```
- in: query
```

```
name: category
```

```
description: Category of the products
```

```
schema:
```

```
type: string
```

```
required: false
```

```
- in: query
```

```
name: priceRange
```

```
description: Integer with the maximum price of the product
```

```
schema:
```

```
type: integer
```

```
required: false
```

```
- in: query
```

```
name: review
```

```
description: Integer with the minimum review of the product
```

```
schema:
```

```
type: integer
```

```
required: false
```

```
responses:
```

```
'200':
```

```
description: Success
```

```
content:
```

```
application/json:
```

```
schema:
```

```
type: array
```

```
items:
```

```
type: object
```

```
properties:
```

```
id:
```

```
type: string
```

```
name:
```

```
type: string
```

```
price:
```

```
type: integer
```

```
category:
```

```
type: string
```

```
description:
```

```
type: string
```

```

    inStock:
      type: boolean
    details:
      type: array
      items:
        type: array
        items:
          type: string
  example:
    - id: 1
      name: Asus Computer
      price: 300
      category: Computers
      description: This asus computer is the best for its price
      inStock: true
      details: [["16GB", "RAM"], ["i7-7000K", "Processor"],
["512GB", "HDD"]]
    - id: 2
      name: Cyber Punk
      price: 59
      category: Video Games
      description: Cyber Punk is a futuristic RPG that will blow
you away with stunning graphics
      inStock: false
      details: [["18+", "Age restriction"], ["01-10-2020",
"Release Date"], ["CDPR", "Developer"]]
  /item/{id}:
    parameters:
      - in: path
        name: id
        description: Product Identifier
        schema:
          type: integer
        required: true

  get:
    operationId: R202
    summary: 'R202: View product page'
    description: "Show a product's page containing all its information.
Access: PUB"

    tags:
      - 'M02: Products and categories'

  responses:
    '200':
      description: 'ok. Show [UI08]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui08-item)'
    '404':
      description: 'Product not found!'

  /item/{id}/review:
    parameters:
      - in: path
        name: id
        description: Product Identifier
        schema:
          type: integer

```

```

    required: true

post:
  operationId: R501
  summary: 'R501: Submit product review'
  description: "AJAX request. Submits a review with rating to a product.
Access: USR"
  tags:
    - 'M05: Products and reviews'

requestBody:
  required: true
  content:
    application/json:
      schema:
        type: object
        properties:
          review_text:
            type: string
          rating:
            type: integer
        required:
          - rating

responses:
  '201':
    description: "Review added successfully."
    content:
      application/json:
        schema:
          type: object
          properties:
            id:
              type: integer
            text:
              type: string
            rating:
              type: integer

          example:
            id: 1
            text: "Amazing product"
            rating: 5
  '401':
    description: "Unauthenticated user cannot review product."
  '403':
    description: "User already reviewed this product / invalid review."

/review/{reviewId}:
  parameters:
    - in: path
      name: reviewId
      description: Review Identifier
      schema:
        type: integer
      required: true

put:

```

```

operationId: R502
summary: 'R502: Edit product review'
description: "AJAX request. Updates a user review of the product. Access:
OWN"
tags:
  - 'M05: Products and reviews'

requestBody:
  required: true
  content:
    application/json:
      schema:
        type: object
        properties:
          review_text:
            type: string
          rating:
            type: integer
        required:
          - review_id
          - rating

responses:
  '200':
    description: "Review edited successfully."
    content:
      application/json:
        schema:
          type: object
          properties:
            text:
              type: string
            rating:
              type: integer

          example:
            id: 1
            text: "Not amazing anymore"
            rating: 3
  '401':
    description: "Unauthenticated user cannot edit review."
  '406':
    description: "Invalid review. Update failed."
delete:
  operationId: R503
  summary: 'R503: Delete product review'
  description: "AJAX that deletes a user review of the product. Access: OWN,
ADM"
  tags:
    - 'M05: Products and reviews'

  responses:
    '200':
      description: "Review deleted successfully."
    '401':
      description: "Unauthenticated user cannot delete reviews."
    '406':
      description: "Invalid review. Deletion failed."

```

```
/about:
  get:
    operationId: R401
    summary: 'R401: View About page'
    description: 'Get the About page. Access: PUB'
    tags:
      - 'M04: Static Pages'

    responses:
      '200':
        description: 'Ok. Show [UI02]'
        (https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui02-about)'

/faq:
  get:
    operationId: R402
    summary: 'R402: View FAQ page'
    description: 'Get the FAQ page. Access: PUB'
    tags:
      - 'M04: Static Pages'

    responses:
      '200':
        description: 'Ok. Show [UI03]'
        (https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui03-faq)'

/contacts:
  get:
    operationId: R403
    summary: 'R403: View Contacts page'
    description: 'Get the Contacts page. Access: PUB'
    tags:
      - 'M04: Static Pages'

    responses:
      '200':
        description: 'Ok. Show [UI04]'
        (https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui04-contacts)'

/management:
  get:
    operationId: R301
    summary: 'R301: View administration page'
    description: "Show administration area. Access: ADM"

    tags:
      - 'M03: Management'

    responses:
      '200':
        description: 'Ok. Show [UI06]'
        (https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui06-admin-main-page)'

/management/manageUsers:
  get:
    operationId: R302
```

```

summary: 'R302: View user administration page'
description: "Show user administration area. Access: ADM"

tags:
  - 'M03: Management'

responses:
  '200':
    description: 'Ok. Show [UI14]'
    (https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui14-user-
    administration)'

/management/item:
  get:
    operationId: R303
    summary: 'R303: Add product Form'
    description: 'Provide add product form. Access: ADM'
    tags:
      - 'M03: Management'
    responses:
      '200':
        description: 'Ok. Show [UI05]'
        (https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui05-add-a-new-item)'
  post:
    operationId: R304
    summary: 'R304: Add product Action'
    description: 'Processes the add product form submission. Access: ADM'
    tags:
      - 'M03: Management'

requestBody:
  required: true
  content:
    application/x-www-form-urlencoded:
      schema:
        type: object
        properties:
          name: # <!-- form field name
            type: string
          price: # <!-- form field name
            type: integer
          category: # <!-- form field name
            type: string
          pictures:
            type: array
            items:
              type: string
              format: binary
          details:
            type: array
            items:
              type: array
              items:
                type: string
          brief_description: # <!-- form field name
            type: string
          description: # <!-- form field name
            type: string

```

```

        required:
          - name
          - price
          - category
          - pictures
          - brief_description
          - description
          - details

responses:
  '302':
    description: 'Redirect after processing the product addition fields.'
    headers:
      Location:
        schema:
          type: string
        examples:
          302Success:
            description: 'Successful addition. Redirect to item page.'
            value: '/products/{id}'
          302Error:
            description: 'Failed authentication. Redirect to add product
form.'
            value: '/admin/addproduct'

/management/item/{id}:
  parameters:
    - in: path
      name: id
      description: Product identifier
      schema:
        type: integer
      required: true

  put:
    operationId: R305
    summary: 'R305: Edit product Action'
    description: 'Processes edit product form submission. Access: ADM'
    tags:
      - 'M03: Management'

  requestBody:
    required: true
    content:
      application/x-www-form-urlencoded:
        schema:
          type: object
          properties:
            name:
              type: string
            price:
              type: integer
            category:
              type: string
            pictures:
              type: array
              items:
                type: string

```



```

        format: binary
        details:
          type: array
          items:
            type: array
            items:
              type: string
        brief_description:      # <!-- form field name
          type: string
        description:           # <!-- form field name
          type: string
        required:
          - name
          - price
          - category
          - pictures
          - brief_description
          - description
          - details

responses:
  '302':
    description: 'Redirect after processing the product addition fields.'
    headers:
      Location:
        schema:
          type: string
      examples:
        302Success:
          description: 'Successful addition. Redirect to item page.'
          value: '/products/{id}'
        302Error:
          description: 'Failed authentication. Redirect to add product
form.'
          value: '/admin/addproduct'
/admin/userManagement/ban:

post:
  operationId: R306
  summary: 'R306: Ban user Action'
  description: 'Processes the ban user operation. Access: ADM'
  tags:
    - 'M03: Management'

requestBody:
  required: true
  content:
    application/json:
      schema:
        type: object
        properties:
          user_id:
            type: integer

responses:
  '302':
    description: 'Redirect after processing the user ban.'
    headers:

```

```

    Location:
      schema:
        type: string
      examples:
        302Success:
          description: 'Successful ban. Redirect to user management.'
          value: '/admin/userManagement'
        302Failure:
          description: 'Failed ban. Redirect to user management.'
          value: '/admin/userManagement'

/admin/userManagement/promote:

  patch:
    operationId: R307
    summary: 'R307: Promote user Action'
    description: 'Processes the promote user operation. Access: ADM'
    tags:
      - 'M03: Management'

    requestBody:
      required: true
      content:
        application/json:
          schema:
            type: object
            properties:
              user_id:
                type: integer

    responses:
      '302':
        description: 'Redirect after processing the user promotion.'
        headers:
          Location:
            schema:
              type: string
            examples:
              302Success:
                description: 'Successful promotion. Redirect to user
management.'
                value: '/admin/userManagement'
              302Failure:
                description: 'Failed promotion. Redirect to user management.'
                value: '/admin/userManagement'

/admin/discountProduct:

  post:
    operationId: R309
    summary: 'R309: Add product discount Action'
    description: 'AJAX request. Add a discount to a chosen product. Access:
ADM'
    tags:
      - 'M03: Management'

    requestBody:
      required: true
      content:

```

```

    application/json:
      schema:
        type: object
        properties:
          product_id:
            type: integer
          percentage:
            type: integer
          begin_date:
            type: string
          end_date:
            type: string

      responses:
        '200':
          description: 'Discount added to product successfully.'

/admin/discountCategory:
  post:
    operationId: R310
    summary: 'R310: Add category discount Action'
    description: 'AJAX request. Add a discount to all products of a chosen category. Access: ADM'
    tags:
      - 'M03: Management'

    requestBody:
      required: true
      content:
        application/json:
          schema:
            type: object
            properties:
              category_id:
                type: integer
              percentage:
                type: integer
              begin_date:
                type: string
              end_date:
                type: string

      responses:
        '200':
          description: 'Discount added to product successfully.'
        '401':
          description: 'Product not found'

/admin/discounts:
  post:
    operationId: R311
    summary: 'R311: Remove product discounts Action'
    description: 'AJAX request. Removes current discounts on a product. Access: ADM'
    tags:
      - 'M03: Management'

    requestBody:

```

```

    required: true
    content:
      application/json:
        schema:
          type: object
          properties:
            product_id:
              type: integer

  responses:
    '200':
      description: 'Discounts removed from product successfully.'
    '401':
      description: 'Item or discount not found'
      headers:
        Location:
          schema:
            type: string
          examples:
            401Item:
              description: 'Item not found'
            401Discount:
              description: 'Discount not found'

```

/admin/purchases/{id}/purchaseStatus:

```

patch:
  operationId: R312
  summary: 'R312: Update purchase status Action'
  description: 'AJAX request. Update the status of a purchase. Access: ADM'
  tags:
    - 'M03: Management'

```

```

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

```

```

requestBody:
  required: true
  content:
    application/json:
      schema:
        type: integer # <!-- status type

```

```

  responses:
    '200':
      description: 'Discounts removed from product successfully.'

```

```

post:
  operationId: R203
  summary: 'R203: Edit product Action'
  description: 'Processes the edit product form submission. Access: ADM'
  tags:

```

- 'M02: Products and categories'

parameters:

- in: path
 - name: id
 - description: Product identifier
 - schema:
 - type: integer
 - required: true

requestBody:

required: true

content:

application/x-www-form-urlencoded:

schema:

type: object

properties:

name: # <!-- form field name

type: string

price: # <!-- form field name

type: integer

category: # <!-- form field name

type: string

pictures:

type: array

items:

type: string

format: binary

brief_description: # <!-- form field name

type: string

details:

type: array

items:

type: array

items:

type: string

description: # <!-- form field name

type: string

responses:

'302':

description: 'Redirect after processing the edit product form fields.'

headers:

Location:

schema:

type: string

examples:

302Success:

description: 'Successful edit. Redirect to item page.'

value: '/products/{id}'

302Error:

description: 'Failed edit. Redirect to item page.'

value: '/products/{id}'

delete:

operationId: R204

summary: 'R204: Delete product Action'

description: 'Processes the delete product action. Access: ADM'

tags:

```

- 'M02: Products and categories'

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

responses:
  '302':
    description: 'Redirect after processing the product deletion.'
    headers:
      Location:
        schema:
          type: string
        examples:
          302Success:
            description: 'Successful deletion. Redirect to main page.'
            value: '/mainpage'
          302Error:
            description: 'Failed deletion. Redirect to main page.'
            value: '/mainpage'

/item/{id}/stock:
  patch:
    operationId: R205
    summary: 'R205: Update product stock Action'
    description: 'AJAX request. Update the current stock of a product. Access:
ADM'
    tags:
      - 'M02: Products and categories'

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

requestBody:
  required: true
  content:
    application/json:
      schema:
        type: object
        properties:
          stock:
            type: integer

responses:
  '200':
    description: 'Sucessfully added item to wishlist.'
  '401':
    description: 'Unauthorized user cannot edit product stock'

```

```

/user/{id}/wishlist:
  parameters:
    - in: path
      name: id
      description: User identifier
      schema:
        type: integer
      required: true

  get:
    operationId: R601
    summary: 'R601: View user's wishlist'
    description: 'Redirect to user's wishlist page. Access: OWN, ADM'
    tags:
      - 'M06: wishlist and cart'
    responses:
      '200':
        description: 'ok. Show [UI07]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui07-cart)'

/wishlist:
  post:
    operationId: R602
    summary: 'R602: Add item to wishlist API'
    description: 'AJAX request. Adds an item to the users wishlist. Access:
OWN'
    tags:
      - 'M06: wishlist and cart'

    requestBody:
      required: true
      content:
        application/json:
          schema:
            type: object
            properties:
              productID:
                type: integer

    responses:
      '200':
        description: 'Sucessfully added item to wishlist.'
      '401':
        description: 'The password does not correspond to the email.'

/wishlist/{id}:
  parameters:
    - in: path
      name: id
      description: Product identifier
      schema:
        type: integer
      required: true

  delete:
    operationId: R603
    summary: 'R603: Remove item from wishlist'

```

```

    description: 'AJAX request. Removes an item from the user''s wishlist.
Access: OWN'
    tags:
      - 'M06: wishlist and cart'

    responses:
      '200':
        description: 'Sucessfully removed item from wishlist.'
      '401':
        description: 'Unauthenticated user cannot remove item from wishlist.'
      '406':
        description: 'Item not in the wishlist'

/user/{id}/cart:
  get:
    operationId: R604
    summary: 'R604: View user''s cart'
    description: 'Redirect to user''s cart page. Access: OWN, ADM'
    tags:
      - 'M06: wishlist and cart'

    parameters:
      - in: path
        name: id
        description: id of the user that has the correponding cart
        schema:
          type: integer
        required: true

    responses:
      '200':
        description: 'Ok. show [UI07]
(https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/-/wikis/er#ui07-cart)'

/cart/{id}:
  parameters:
    - in: path
      name: id
      description: product
      schema:
        type: integer
      required: true

  delete:
    operationId: R606
    summary: 'R606: Remove item from cart'
    description: 'AJAX request. Removes an item from the user''s cart. Access:
OWN'
    tags:
      - 'M06: wishlist and cart'

    responses:
      '200':
        description: 'Sucessfully removed item from cart.'
      '401':
        description: 'Unauthenticated user cannot remove item from cart.'
      '406':

```



```

        description: 'Item not in the cart'

/cart:
  post:
    operationId: R605
    summary: 'R605: Add item to cart'
    description: 'AJAX request. Adds an item with chosen quantity to the users
cart. Access: OWN'
    tags:
      - 'M06: wishlist and cart'

    requestBody:
      required: true
      content:
        application/json:
          schema:
            type: object
            properties:
              productID:
                type: integer
              quantity:
                type: integer

    responses:
      '200':
        description: 'Sucessfully added item to cart.'
      '406':
        description: 'Item not available.'

  patch:
    operationId: R607
    summary: 'R607: Edit Product cart quantity'
    description: 'AJAX request. Updates the quantity of a product in the
user's cart. Access: OWN'
    tags:
      - 'M06: wishlist and cart'

    requestBody:
      required: true
      content:
        application/json:
          schema:
            type: object
            properties:
              productID:
                type: integer
              quantity:
                type: integer

    responses:
      '200':
        description: 'Sucessfully updated item quantity.'
      '401':
        description: 'Unauthenticated user cannot update quantity in cart.'
      '406':
        description: 'Item not in the cart'

/admin/announcement:

```

```
post:
  operationId: R313
  summary: 'R313: Add announcement Action'
  description: 'AJAX request. Add an announcement. Access: ADM'
  tags:
    - 'M03: Management'

  requestBody:
    required: true
    content:
      application/json:
        schema:
          type: object
          properties:
            picture:
              type: string
              format: binary

  responses:
    '200':
      description: 'Announcement added successfully.'
```

/admin/announcement/{id}:

```
parameters:
  - in: path
    name: id
    description: Announcement identifier
    schema:
      type: integer
    required: true

post:
  operationId: R314
  summary: 'R314: Remove announcement Action'
  description: 'AJAX request. Remove an announcement. Access: ADM'
  tags:
    - 'M03: Management'

  requestBody:
    required: true
    content:
      application/json:
        schema:
          type: object
          properties:
            announcement_id:
              type: integer

  responses:
    '200':
      description: 'Announcement removed successfully.'
```

/checkout:

```
get:
  operationId: R608
  summary: 'R608: Checkout Form'
  description: 'Provide checkout form. Access: USR'
  tags:
```

```

    - 'M06: wishlist and cart'
  responses:
    '200':
      description: 'Ok. "NOT YET IMPLEMENTED'

  post:
    operationId: R609
    summary: 'R609: Checkout Action'
    description: 'Processes the checkout form submission. Access: PUB'
    tags:
      - 'M06: wishlist and cart'

  requestBody:
    required: true
    content:
      application/x-www-form-urlencoded:
        schema:
          type: object
          properties:
            address:
              type: object
              properties:
                zip-code:
                  type: string
                street:
                  type: string
                city:
                  type: string
                country:
                  type: string
            shipping:
              type: string
            payment_method:
              type: string
          required:
            - address
            - shipping
            - payment_method

  responses:
    '302':
      description: 'Redirect after processing the checkout information.'
      headers:
        Location:
          schema:
            type: string
      examples:
        302Success:
          description: 'Successful checkout. Redirect to mainpage.'
          value: '/mainpage'
        302Failure:
          description: 'Failed checkout. Redirect to checkout.'
          value: '/checkout'

```

A8: Vertical prototype

The vertical prototype includes the implementation of some of the user stories described in the er artifacts and aims to validate our product. Our main focus was the item page and some of it's interactions, but we also implemented all user interfaces as well as the authentication system (such as login, register and logout), some policies and middlewares.

1. Implemented Features

1.1. Implemented User Stories

User Story reference	Name	Priority	Description
US01	Access Home	high	As a <i>User</i> , I want to access the website's homepage, so that I can know its general-purpose
US02	Access About Page	high	As a <i>User</i> , I want to access the 'About' page, so that I can see a complete and detailed description of the website
US03	See Contacts	high	As a <i>User</i> , I want to consult the website's contacts, so that I know how to contact the team if needed
US04	Search items	high	As a <i>User</i> , I want to search for an item's name, so that I can get more information about it
US06	View items	high	As a <i>User</i> , I want to view all the items, so that I can see all the products available
US11	Sign-up	high	As a <i>Visitor</i> , I want to be able to create a new account so that I'm able to authenticate myself
US12	Sign-in	high	As a <i>Visitor</i> , I want to be able to authenticate myself so that I'm able to buy products
US13	Administrator Sign-in	high	As a <i>Visitor</i> , I want to be able to sign-in as an administrator if I'm permitted to do so
US21	View purchase history	high	As an <i>Authenticated</i> , I want to see my purchasing history, so that I can see the products I have bought
US22	Rate item	high	As an <i>Authenticated</i> , I would like to attribute a score to an item, so that other users can know my basic opinion of the item
US23	Comment item	high	As an <i>Authenticated</i> , I would like to attach a comment to an item, so that other users can know my more complete opinion of the item
US24	Remove comment	high	As an <i>Authenticated</i> , I want to be able to be able to delete my own comments so that I'm able to remove comments that I don't find useful
US25	Add to cart	high	As an <i>Authenticated</i> , I want to add an item to my cart, so that I am able to purchase it

User Story reference	Name	Priority	Description
US26	Remove from cart	high	As an <i>Authenticated</i> , I want to remove an item from my cart, so that I can reconsider my purchase before I finalize it
US28	Logout	high	As an <i>Authenticated</i> , I want to be able to log out from my account, so that I can exit my account
US211	View Cart	high	As an <i>Authenticated</i> , I want to see my car, so that I can make sure i added the correct items to it
US212	View product recommendations	medium	As an <i>Authenticated</i> , I would like to have a list of recommended items according to my history of products, so that I can easily find products that may be of my interest
US213	View notifications	medium	As an <i>Authenticated</i> , I would like to have notifications when my comment is answered, a product in my wishlist is restocked or put on sale, so that I can be on time to make the best purchases
US214	View wish list	medium	As an <i>Authenticated</i> , I want to see my wish list, so that I can decide if I want to purchase the items in it
US37	Logout	high	As an <i>Administrator</i> , I want to be able to log out from my account, so that I can exit my account
US312	View users profile	medium	As an <i>Administrator</i> , I want to be able to view all users profile, so that I can get check their information
US38	View all unbanned users	high	As an <i>Administrator</i> , I want to be able to see a list of all unbanned users, so that I can manage them with ease
US314	View users buy history	low	As an <i>Administrator</i> , I want to be able to view customer's purchase history, so that I can get a better understanding of what users look for the most

1.2. Implemented Web Resources

Module M01: Authentication and profile

Web Resource Reference	URL
R101: Login Form	/login
R102: Login Action	POST /login
R103: Logout Action	POST /logout
R104: Register Form	/register
R105: Register Action	POST /register
R110: View user profile	/userProfile/{id}
R114: View user's purchase history	/userProfile/{id}/purchaseHistory

Module M02: Products and categories

Web Resource Reference	URL
R201: Search products API	/api/items
R202: View product page	/item/{id}

Module M03: Management

Web Resource Reference	URL
R301: View administration page	/management
R302: View user administration page	/management/manageUsers
R303: Add product Form	/management/addItem

Module M04: Static Pages

Web Resource Reference	URL
R401: View About page	/about
R402: View FAQ page	/faq
R403: View Contacts page	/contacts

Module M05: Products and reviews

Web Resource Reference	URL
R501: Submit product review	POST /item/{id}/review
R502: Edit product review	PUT /review/{reviewId}
R503: Delete product review	DELETE /review/{reviewId}

Module M06: Wishlist and cart

Web Resource Reference	URL
R601: View user's wishlist	/userProfile/{id1}/wishlist
R604: View user's cart	/userProfile/{id}/cart
R605: Add item to cart	POST /cart
R606: Remove item from cart	DELETE /cart/{id}
R608: Checkout Form	/checkout

2. Prototype

Prototype: <http://lbaw2111.lbaw-prod.fe.up.pt/>

Credentials:

Admin:

Email: lbawAdmin@gmail.com

Password: lbawadmin

User:

Email: normallogin@gmail.com

Password: normaluser

Source code: <https://git.fe.up.pt/lbaw/lbaw2021/lbaw2111/>

Revision history

Changes made to the first submission:

1. Item 1
2. ..

GROUP2111, 26/04/2021

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