

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

The product consists of an online auction website where you are able to bid on and create auctions.

In this artifact, we intend to document all of the modules and web resources including all their properties and relevant characteristics.

1. Overview

This section, as the name indicates, presents a brief description of each module.

M01: User authentication and User Profiles	Web resources associated with user authentications and the control over the users properties, includes these system features: login, registration, viewing and editing personal profile information.
M02: Auctions	Web resources associated with the auctioned items, this includes viewing an item, editing an item, searching and bidding on an item.
M03: Ratings, Watchlist and Notifications	Web resources associated with the seller ratings and user's watchlists, includes rating a seller and adding an auction to the watchlist as well as the given notifications.
M04: Administration	Web resources associated with the admin's high level permissions, includes validating reports, and deleting user accounts as well as stop auctions.
M05: Other pages	Web resources associated with other pages, includes the about us section, the testimonials and homepage.

2. Permissions

This section defines the different clearance levels and their respective conditions of access.

GST	Guest	No special privileges.
AUT	Authenticated User	These users have the ability to take part in the websites trade.
OWN	Owner	These users have the ability to edit or stop the auctions they own.
ADM	Admin	Has the ability to rule over the others permissions.

3. Modules

This section describes all the web resources of every module, taking into account the URL and HTTP methods and the user interfaces.

3.1 Module M01: User authentication and User Profiles

Endpoints of module User authentication and User Profiles

- **R101: Login Form** [/login]
- **R102: Login Action** [/login]
- **R103: Register Form** [/register]
- **R104: Register Action** [/register]
- **R105: View Profile** [/profiles/{id}]
- **R106: Edit Profile Form** [/profiles/{id}/edit]
- **R107: Edit Profile Action** [/profiles/{id}/edit]
- **R108: Logout** [/logout]
- **R109: Password Recovery Request Form** [/password/reset]
- **R110: Password Recovery Request Action** [/password/email]
- **R111: Password Recovery Form** [/password/reset/{token}]
- **R112: Password Recovery Action** [/password/reset]

R101: Login Form

URL	/login
Description	Page with a form to login to a user account.
Method	GET
UI	UI12
SUBMIT	R102
Permissions	GST

R102: Login Action

URL	/login		
Description	This web resource logs the user into the system. Redirects to the homepage on success and to the login form on failure.		
Method	POST		
Request Body	+email: string		Email
	+password: string		Password
Redirects	R502		Success
	R101		Error
Permissions	GST		

R103: Register Form

URL	/register
Description	Page with a form to register a new user account.
Method	GET
UI	UI12
SUBMIT	R104
Permissions	GST

R104: Register Action

URL	/register	
Description	This web resource inserts the user into the system. Redirects to the homepage on success and the register form on failure.	
Method	POST	
Request Body	+name: string	Full name
	+email: string	Email
	+password: string	Password
	+confirm_password: string	Password confirmation
	?profile_photo: file	User's profile photo
Redirects	R502	Success
	R103	Error
Permissions	GST	

R105: View Profile

URL	/profiles/{id}	
Description	Shows the user individual profile page.	
Method	GET	
Parameters	+id: integer	user primary key
UI	UI09	
Permissions	AUT	

R106: Edit Profile Form

URL	<code>/profiles/{id}/edit</code>	
Description	Page with a form field with the user's current data that allows him to change it.	
Method	GET	
Parameters	+id: integer	user primary key
UI	UI10	
SUBMIT	R107	
Permissions	AUT	

R107: Edit Profile Action

URL	<code>/profiles/{id}/edit</code>	
Description	Web resource that changes user profile data based on the input received. Redirects to the user profile on success and edit profile page on failure.	
Method	PUT	
Parameters	+id: integer	user primary key
Request Body	?name: string	New name
	?email: string	New Email
	?password: string	New password
	?profile_photo: file	New profile picture
Redirects	R105	Success
	R106	Error
Permissions	AUT	

R108: Logout

URL	/logout		
Description	Web resource that logs out an authenticated user or an administrator of the website.		
Method	POST		
Redirects	R502		Success
Permissions	AUT		

R109: Password Recovery Request Form

URL	/password/reset		
Description	Page with the form that allows the user to ask to reset his password.		
Method	GET		
UI	Not developed in A3		
SUBMIT	R110		Success
Permissions	GST		

R110: Password Recovery Request Action

URL	/password/email		
Description	This web resource sends an email with a reset link to the email specified.		
Method	POST		
Request Body	+email: string		Email
Redirects	R101		Success
	R109		Error
Permissions	GST		

R111: Password Recovery Form

URL	/password/reset/{token}		
Description	Page with the form that allows the user to reset his password.		
Method	GET		
UI	Not developed in A3		
SUBMIT	R112		Success

Permissions GST

R112: Password Recovery Action

URL	/password/reset	
Description	This web resource resets the user's password.	
Method	POST	
Request Body	+email: string	Email
	+password: string	New Password
	+confirm_password: string	Confirm New Password
Redirects	R101	Success
	R111	Error
Permissions	GST	

3.2 Module M02: Auctions

Endpoints of module Auctions

- **R201: Search Auctions** [[/auctions/search](#)]
- **R202: Search Auction API** [[/api/auctions/search](#)]
- **R203: View Auction** [[/auctions/{id}](#)]
- **R204: View Auction API** [[/api/auctions/{id}](#)]
- **R205: Add Auction Form** [[/auctions](#)]
- **R206: Add Auction Action** [[/auctions](#)]
- **R207: Edit Auction Form** [[/auctions/{id}/edit](#)]
- **R208: Edit Auction Action** [[/auctions/{id}/edit](#)]
- **R209: Delete Auction Action** [[/auctions/{id}](#)]
- **R210: Delete Image** [[/api/images/{id}](#)]

R201: Search Auctions

URL	/auctions/search	
Description	Web resource that searches for all the auctions matching the request parameters and returns them.	
Method	GET	
Parameters	?category: integer	Category, NULL searches in all of them

	?main_color: integer	Main color, NULL searches in all of them
	?dev_stage: integer	Development stage, NULL searches in all of them
	?max_price: integer	Maximum price, NULL searches in all of them
	?climbs: integer	Climbing skill, if not NULL the auction has to include this skill
	?jumps: integer	Jumping skill, if not NULL the auction has to include this skill
	?talks: integer	Talking skills, if not NULL the auction has to include this skill
	?skates: integer	Skating skills, if not NULL the auction has to include this skill
	?olfaction: integer	Olfaction skill, if not NULL the auction has to include this skill
	?navigation: integer	Moonlight Navigation skill, if not NULL the auction has to include this skill
	?echolocation: integer	Echolocation skill, if not NULL the auction has to include this skill
	?acrobatics: integer	Acrobatic skills, if not NULL the auction has to include this skill
	?query: string	String field to search in auctions
UI	UI03	
AJAX Calls	R202	
Permissions	GST, AUT	

R202: Search Auctions API

URL	/api/auctions/search	
Description	Web resource that searches for auctions with the specified parameters and returns them.	
Method	GET	
Request Body	?category: integer	Category, NULL searches in all of them

Parameters	Parameter	Description
	?main_color: integer	Main color, NULL searches in all of them
	?dev_stage: integer	Development stage, NULL searches in all of them
	?max_price: integer	Maximum price, NULL searches in all of them
	?climbs: integer	Climbing skill, if not NULL the auction has to include this skill
	?jumps: integer	Jumping skill, if not NULL the auction has to include this skill
	?talks: integer	Talking skills, if not NULL the auction has to include this skill
	?skates: integer	Skating skills, if not NULL the auction has to include this skill
	?olfaction: integer	Olfaction skill, if not NULL the auction has to include this skill
	?navigation: integer	Moonlight Navigation skill, if not NULL the auction has to include this skill
	?echolocation: integer	Echolocation skill, if not NULL the auction has to include this skill
	?acrobatics: integer	Acrobatic skills, if not NULL the auction has to include this skill
	?query: string	String field to search in auctions
Response	JSON	Success
Permissions	GST, AUT	

R203: View Auction

URL	/auctions/{id}	
Description	Page with auction details.	
Method	GET	
Parameters	+id: integer	auction primary key
UI	UI06	
AJAX Calls	R204	

Permissions GST, AUT

R204: View Auction API

URL	<code>/api/auctions/{id}</code>	
Description	Web resource that locates an auction and returns its details.	
Method	GET	
Parameters	+id: integer	auction primary key
Response JSON	JSON204	
Permissions	GST, AUT	

R205: Add Auction Form

URL	<code>/auctions</code>	
Description	Page with a form to create a new auction.	
Method	GET	
UI	UI07	Success
Submit	R206	Success
Permissions	AUT	

R206: Add Auction Action

URL	<code>/auctions</code>	
Description	Web resource that creates a new auction with the given parameters.	
Method	POST	
Request Body	+name: string	New auction name
	+description: string	A description about the animal and seller
	+species_name: string	The species of the animal
	+age: integer	Animal's age
	+starting_price: integer	The minimum price to start the auction
	+buyout_price: integer	Value to be given that allows an auction to finish before time

+current_price: integer	Value of the current highest bid, same as starting price
+ending_date: date	The date when the auction is suppose to end
+id_category: integer	ID of the category of the auction
+id_main_color: integer	ID of the main color of the animal
+id_dev_stage: integer	ID of the development stage of the animal
+id_seller: integer	ID of the seller creating the auction
?climbs: integer	Climbing skill, if not NULL the auction includes this skill
?jumps: integer	Jumping skill, if not NULL the auction includes this skill
?talks: integer	Talking skills, if not NULL the auction includes this skill
?skates: integer	Skating skills, if not NULL the auction includes this skill
?olfaction: integer	Olfaction skill, if not NULL the auction includes this skill
?navigation: integer	Moonlight Navigation skill, if not NULL the auction includes this skill
?echolocation: integer	Echolocation skill, if not NULL the auction includes this skill
?acrobatics: integer	Acrobatic skills, if not NULL the auction includes this skill
Redirects	R203 Success
	R205 Error
Permissions	AUT

R207: Edit Auction Form

URL	/auctions/{id}/edit	
Description	Page with a form to edit an auction.	
Method	GET	
Parameters	+id: integer	auction primary key
UI	UI08	Success

SUBMIT	R208
Permissions	OWN

R208: Edit Auction Action

URL	<code>/auctions/{id}/edit</code>	
Description	Web resource that edits an auction with the given parameters.	
Method	PUT	
Parameters	+id: integer	auction primary key
Request Body	?name: string	Auction name
	?description: string	A description about the animal and seller
	?species_name: string	The species of the animal
	?age: integer	Animal's age
	?starting_price: integer	The minimum price to start the auction
	?buyout_price: integer	Value to be given that allows an auction to finish before time
	?ending_date: date	The date when the auction is suppose to end
	?id_category: integer	ID to the category of the auction
	?id_main_color: integer	ID to the main color of the animal
	?id_dev_stage: integer	ID to the development stage of the animal
	?climbs: integer	Climbing skill, if not NULL the auction includes this skill
	?jumps: integer	Jumping skill, if not NULL the auction includes this skill
	?talks: integer	Talking skills, if not NULL the auction includes this skill
	?skates: integer	Skating skills, if not NULL the auction includes this skill
	?olfaction: integer	Olfaction skill, if not NULL the auction includes this skill
	?navigation: integer	Moonlight Navigation skill, if not NULL the auction includes this skill

	?echolocation: integer	Echolocation skill, if not NULL the auction includes this skill
	?acrobatics: integer	Acrobatic skills, if not NULL the auction includes this skill
Redirects	R203	Success
	R207	Error
Permissions	OWN	

R209: Delete Auction

URL	/auctions/{id}	
Description	Web resource that deletes the specified auction.	
Method	DELETE	
Parameters	+id: integer	auction primary key
Redirects	UI01	Success in case of ADM
	UI09	Success in case of OWN
	R203	Error
Permissions	OWN, ADM	

R210: Delete Image

URL	/api/images/{id}	
Description	Web resource that deletes an image.	
Method	DELETE	
Parameters	+id: integer	image primary key
Returns	200 OK	The image was successfully deleted.
	400 Bad Request	Error. Error message is specified via a HTTP header.
	404 Not Found	Error. No image with the specified primary key exists
Permissions	AUT	

3.3 Module M03: Ratings, Watchlist and Notifications

Endpoints of module Ratings, Watchlist and Notifications

- **R301: Add to watchlist API** [/api/watchlists]
- **R302: Remove from watchlist API** [/api/watchlists/{id_buyer}/{id_auction}]
- **R303: Rate a seller API** [/api/rates]
- **R304: View notifications** [/profiles/{id_user}/notifications]
- **R305: View watchlist** [/watchlists/{id_buyer}]

R301: Add to watchlist API

URL	/api/watchlists	
Description	Web resource that allows the user to add an auction to his watchlist.	
Method	POST	
Request Body	+id_auction: integer	ID of the auction to add to the watchlist
	+id_buyer: integer	ID of the buyer that is adding the auction to the watchlist
Returns	200 OK	The auction was successfully added to the watchlist.
	400 Bad Request	Error. Error message is specified via a HTTP header.
	404 Not Found	Error. No auction with the specified primary key exists
Permissions	AUT	

R302: Remove from watchlist API

URL	/api/watchlists/{id_buyer}/{id_auction}	
Description	Web resource that removes the auction from the user's watchlist.	
Method	DELETE	
Parameters	+id_auction: integer	ID of the auction to add to the watchlist
	+id_buyer: integer	ID of the buyer that is adding the auction to the watchlist
Returns	200 OK	The auction was successfully removed from the watchlist.

400 Bad Request	Error. Error message is specified via a HTTP header.
404 Not Found OK	Error. No auction with the specified primary key exists
Permissions	AUT, ADM

R303: Rate a seller API

URL	<code>/api/rates</code>	
Description	Web resource that allows an auction winner to rate the seller.	
Method	POST	
Request Body	+id_auction: integer	ID of the auction to rate
	+id_buyer: integer	ID of the buyer that is rating
	+rating: integer	Rating
Returns	200 OK	The rating was successfully made.
	400 Bad Request	Error. This user did not win the auction.
	404 Not Found OK	Error. No auction with the specified primary key exists
Permissions	AUT	

R304: View notifications

URL	<code>/profiles/{id_user}/notifications</code>	
Description	Web resource that allows a user to see his notifications	
Method	GET	
Parameters	+id_user: integer	ID of user who wants to see his notifications
UI	Not developed in A3	
Permissions	AUT	

R305: View Watchlist

URL	<code>/watchlists/{id_buyer}</code>	
Description	Web resource that shows user's watchlist.	
Method	GET	
Parameters	+id_buyer: integer	User id
UI	UI09	
Permissions	AUT	

3.4 Module M04: Administration

Endpoints of Administration

- **R401: Validate Report API** [/api/reports/{id_report}/validate]
- **R402: View reports** [/reports]
- **R403: Deletion Account** [/profiles/{id_user}]
- **R404: Block Account** [/profiles/{id_user}/block]

R401: Validate Report API

URL	<code>/api/reports/{id_report}/validate</code>	
Description	Web resource that allows the admin to validate a report	
Method	PUT	
Parameters	+id_report: integer	ID of the report the admin wants to validate
Request Body	+id_decision: integer	ID representing the decision the admin made towards the given report
Returns	200 OK	The validation was successfully made.
	404 Not Found	Error. No report with the specified primary key exists
Permissions	ADM	

R402: View reports

URL	<code>/reports</code>	
Description	Page that allows the admin to view the most recent reports	
Method	GET	
UI	UI11	

Permissions ADM

R403: Delete Account

URL	<code>profiles/{id_user}</code>	
Description	Web resource that allows the admin or the owner to delete an/its account	
Method	DELETE	
Parameters	+id_user: integer	ID of the account to delete
UI	UI11	ADM
	UI19	OWN
Redirects	N/A	Success in case of ADM
	UI01	Success in case of OWN
Permissions	OWN, ADM	

R403: Block Account

URL	<code>/profiles/{id_user}/block</code>	
Description	Web resource that allows the admin to block an account	
Method	POST	
Request Body	+id_user: integer	ID of the account to delete
	+end_date: date	Date when the block will end
Redirects	N/A	Success in case of ADM
Permissions	ADM	

3.5 Module M05: Other pages

Endpoints of other pages

- **R501: View about us section [/about]**
- **R502: Homepage [/homepage]**

R501: About Us

URL	/about
Description	Page that informs the user about the website administration and creators
Method	GET
UI	UI02
Permissions	GST

R502: Homepage

URL	/homepage
Description	Page with trending auctions and categories
Method	GET
UI	UI01
Permissions	GST

4. JSON/XML Types

JSON202: Search Auctions: {Auction}[]

This JSON type contains an array of auctions, each one containing its id, species name, age, current price and ending date.

```
{
  "auctions": [
    {
      "id": serial,
      "species_name": string,
      "age": string,
      "current_price": positive integer,
      "ending_date": date
    },
    {
      "id": serial,
      "species_name": string,
      "age": string,
      "current_price": positive integer,
      "ending_date": date
    },
    ...
  ]
}
```

Example:

```
{
  "auctions": [
    {
      "id": 1,
      "species_name": "Husky",
      "age": "2 years",
      "current_price": 2998,
      "ending_date": "2020-06-12"
    },
    {
      "id": 3,
      "species_name": "Amazon Parrot",
      "age": "3 months",
      "current_price": 5135,
      "ending_date": "2020-08-12"
    }
  ]
}
```

JSON204: View Auction: {Auction}

This JSON type is used when getting the data to display an auction, and includes an auction's id, name, description, species name, age, current price, ending date, category, main color, development stage and the seller's id.

```
{
  "id": serial,
  "name": string,
  "description": string,
  "species_name": string,
  "age": string,
  "current_price": positive integer,
  "ending_date": date,
  "category": string,
  "main_color": string,
  "dev_stage": string,
  "id_seller": serial
}
```

Example:

```
{
  "id": "3",
  "name": "Michael",
  "description": "Very loyal and funny bird",
}
```

```
"species_name": "Amazon Parrot",  
"age": "3",  
"current_price": "5135",  
"ending_date": "2020-08-12",  
"category": "Birds",  
"main_color": "Blue",  
"dev_stage": "Adult",  
"id_seller": "42"  
}
```

Revision history

1. Changed the naming of some routes, added routes R111, R112 and R210
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