

Objective

The objective of the project is the creation of a website for dog breeder and dog information:

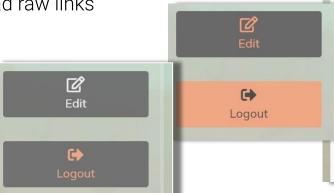
- 1. Designed for registered breeder
- 2. Info about dogs and their breeders
- 3. List of the events to which a dog took part to
- 4. Search for dogs of other breeders
- 5. Let non-registered user to search for an adoptable dog

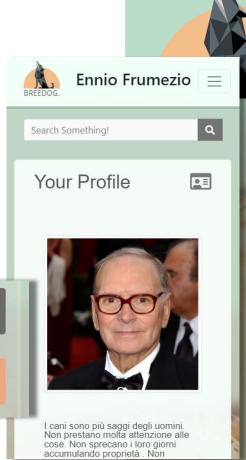


Design

The design choices are made to create a interface user-friendly, readable and intuitive:

- 1. Color palette restricted and consistent
- 2. Material design icons
- 3. Use of buttons instead raw links
- 4. Mobile friendly



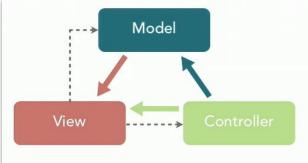


Model-View-Controller

The application adopts the Model-View-Controller paradigm

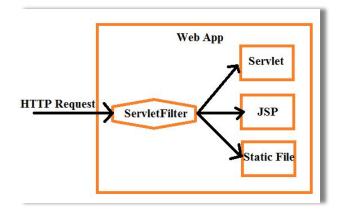
- Model: access method to the data and notification of the state updates.
- View: let the user see the output of an action or the state querying the model and acts as a bridge between user and application.
- Controller: gets the user data from the View, process it and in case updates the state, communicating it to the model.





User Authentication

We implemented the user authentication using the simplest Basic Authorization header where username and password are concatenated with a colon and encoded Base64.

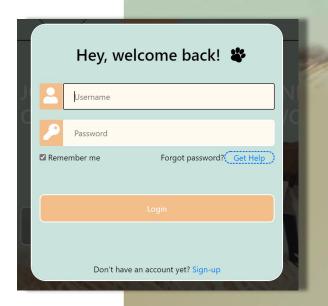


User pages are inside /user/* path.

Requests to this section are filtered using Java Servlet Filter that check if we already logged in.

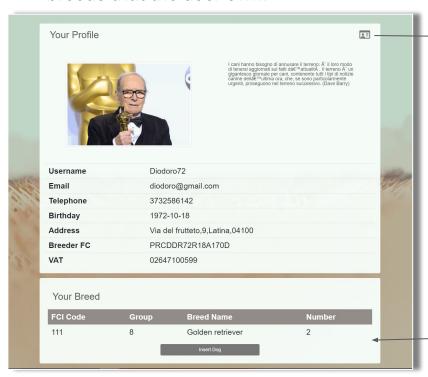
Not logged request will be redirected to the homepage.





HomePage

The homepage shows all the user information and the breeds that the user own.



Breeder profile seen by another user.

Breeds info.



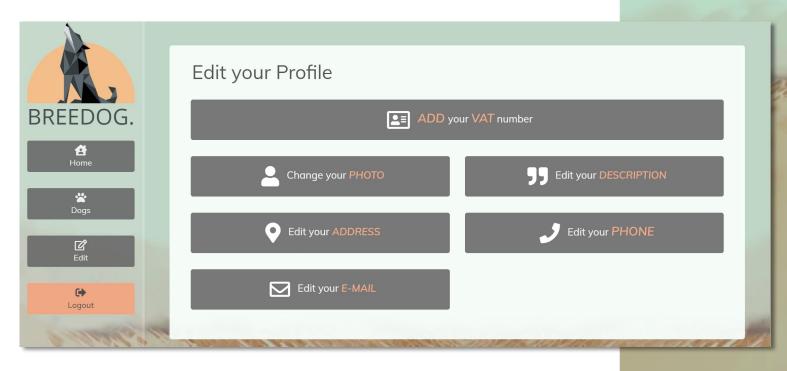


Edit page

Provides the possibility to change user informations.

The possibility to add the vat number is only for the users that haven't registered it yet.

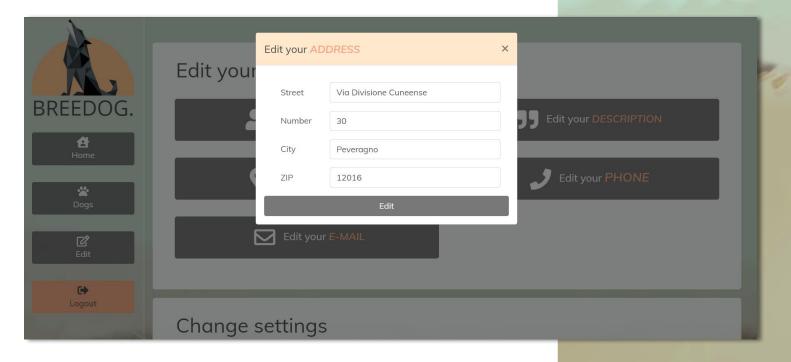




Edit page

The load of the breeder information is generated querying the database with the breeder fiscal code while for each insertion is used a POST request of json data.

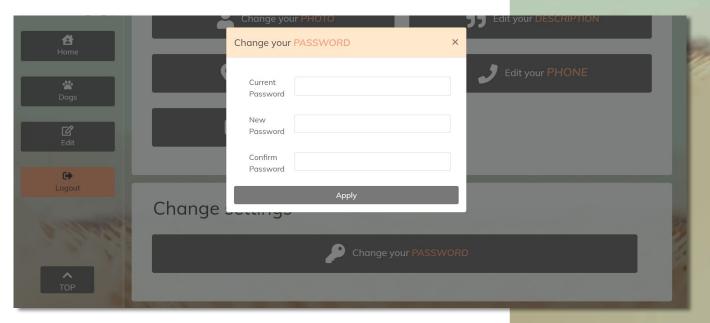




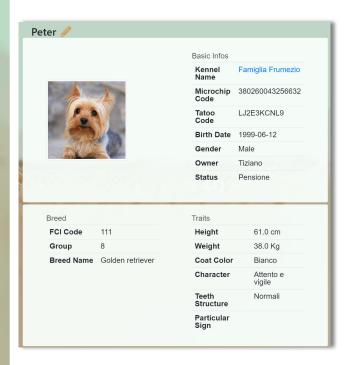
Edit page

In the edit page there is also the possibility to change the user password. The password confirmation is verified with js while the correctness of the current password uses the authentication check.





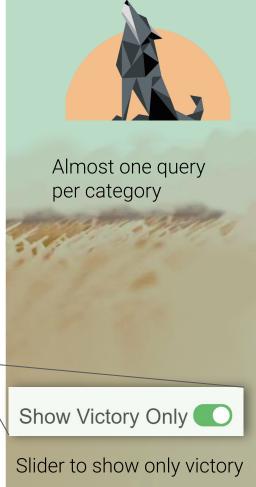
Dog Profile Page



The dog home page can be subdivided into:

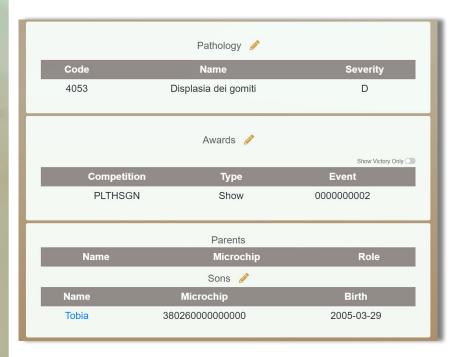
- Dog basic informations
- Pathology
- Awards
- Genealogy

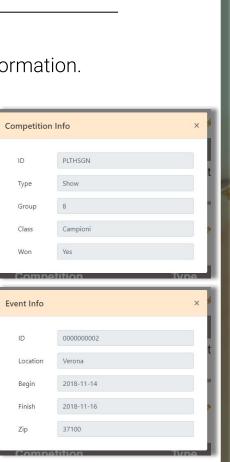




Dog Profile Page

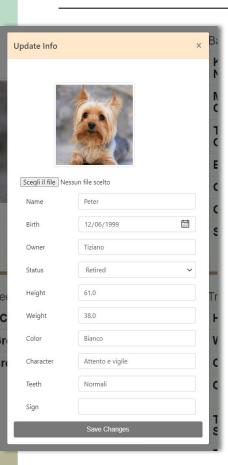
Modals to show competitions and events extra information.

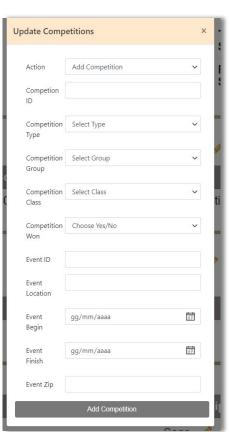






Dog Profile Page





Dynamic Modal to manage Dog information update

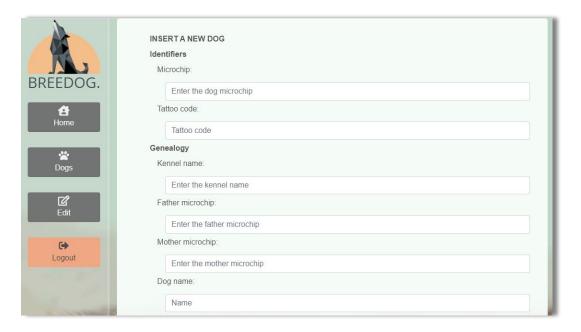






Insertion page

It permits the insertion of a new dog from the breeder logged into the application. It uses a JavaScript form control and sends information to the server through JSON data with a POST request.





Insertion page

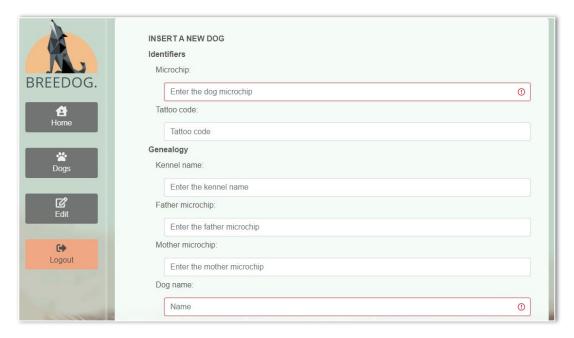
The HTTP request is triggered by the press of the submit button. The request is handled by a Java Servlet that creates the object to parse to the database. After a successful insertion the user is redirect to the home page.

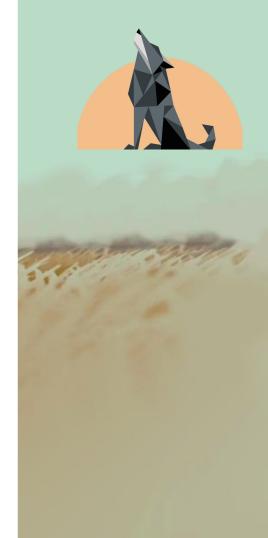




Insertion page

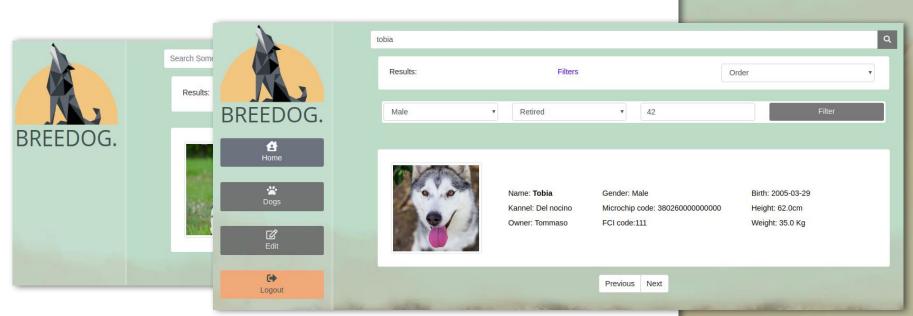
A simple check is implemented in the javascript code for don't let a user insert empty parameters of dog that are mandatory. Forms of bootstrap are retrieved through javascript and they are set to invalid if their are empty.





Search page

Provides access to the dogs information in the database through a search page based on a query and filters. Not registered users can only search for adoptable dogs and only see basic information.



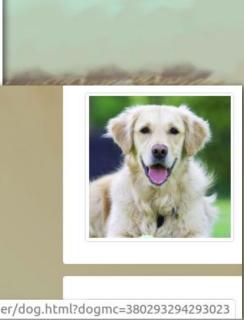
Search results

The search page is provided at search/ as a JSP page and the requests to the database are made through AJAX GET requests to searchDogs/.

The response from the backend is a json file containing a list of resulting resources.

The results are appended to the DOM tree of the page in article elements and only 6 dogs are shown per page, to keep the ison response file small.

With the page pagination the user makes AJAX GET requests to get the next results of his guery.



Search query

The query to the database has a variable number of instruction to satisfy different queries and different type of users.



```
select *
    from dog
    where
    ? IS NULL OR to tsvector(microchip || ' ' || name|| ' ' || kennel || ' ' ||
    coat || ' ' || character || ' ' || owner || ' ' || breederfc) @@ to_tsquery(?))
    AND (? IS NULL OR SEX = ?::gender)
    AND (? IS NULL OR STATUS = ?::dogstatus
    AND (? IS NULL OR STATUS = 'Adottabile')
    AND (? IS NULL OR DATE PART('year', CURRENT DATE) -
      - DATE PART('year', birth::date) < ?::INTEGER) ";
12
     [...]
13
    + " ORDER BY birth ?
    LIMIT ? OFFSET ?:
```



