API Documentation

Describe each end of the api with the following:
- Description/Purpose
- Usage
    - Parameters
   - Returned Data Structure
    - Sample Examples

Back-End

The purpose of the back-end is to be the API and handle all requests and give responses to everything the front-end needs. It sets up the model, builds the database through Spring Data with annotations and structures it with relations. Hibernate, a framework, is utilized to map the java domain model to a relational database, which is set up with the MySQL dialect, the open-source relational database management system. The database is stored in Amazon AWS which provide backup and restoration.

Through the JpaRepositories, Services, and Controllers,

The mapping is set up with a consistency on /api/<entity>. If needed the URLs differ words with use of camel case. To do a get request with the entire entity and the relations, it is possible to do a GET request on /api/<entity>/allInfo, but the /all is adapted specific to what the front-end needs. Except for getting a specific object when doing the /api/<entity>/{id} call, and getting all info, most of the Get mappings are calling on custom queries from the controller, through service to the specific repository.

Representational State Transfer(REST) - a RESTful web service
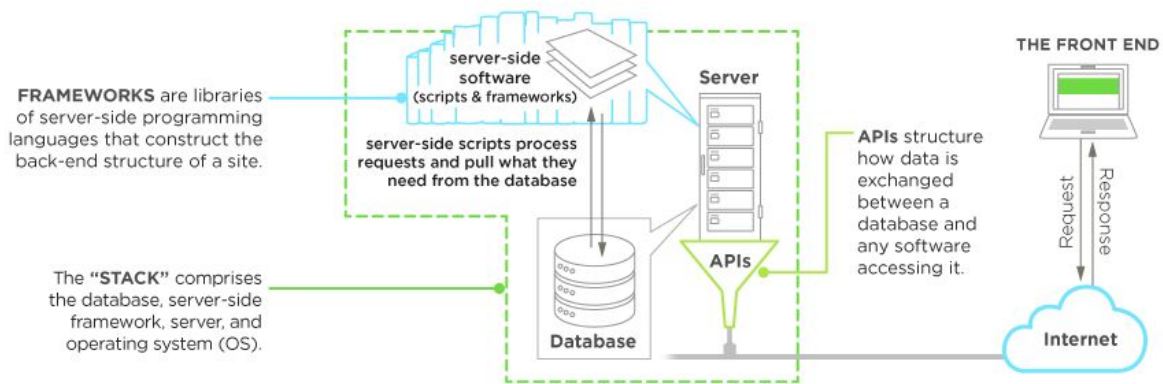
Back-end code adds **utility** to everything the front-end designer creates.

- The back end is a combination of a **database** and a software written in a **server-side language**, which are run on web servers, cloud-based servers, or a hybrid combination of both. A network's server set-up can vary, with the server-side workload divided up between various machines (e.g., a server dedicated to housing the database).
- This server-side application directly interacts with the database via an application programming interface (API), which pulls, saves, or changes data.
- The data are returned and converted into front-end code a user interacts with: filling out a form, creating a profile, shopping online, etc.
- In general, anything you see on a site is made possible by back-end code, which exists on, and is powered by, a server.

Login authentication
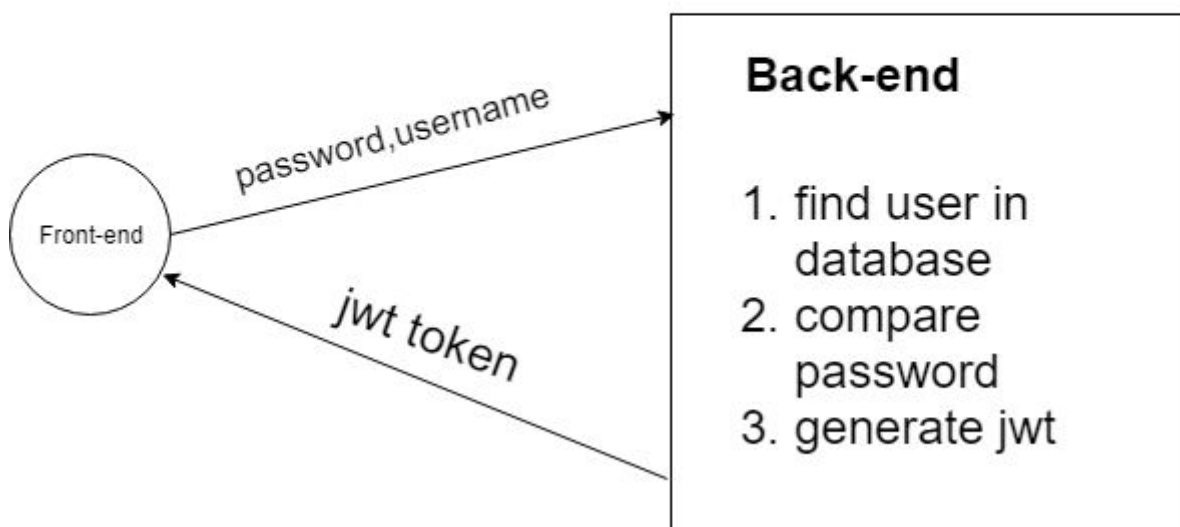
The jwt token is stored in localstorage and sent in the request header (Authorization) for every request to the back-end server.