

CRUD Project Full Stack **Spring Boot – Vue**

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Project Description

This project was developed for going over the basics of web application development using Spring Boot framework in the backend and Vue.js in the frontend. The project includes basic create, read, update and delete (CRUD) operation based on Object Oriented Programming principles. It also includes security module for secured API access and database to store information.

Technology Used

1. Backend Framework – Java Spring Boot for RESTful API development
2. Database – JPA, H2, MySQL
3. Security – Token Based Authentication (JSON Web Token – JWT)
4. Frontend – Vue.js
5. Frontend API Integration using Axios
6. State Management using VUEX
7. CSS Framework – Bootstrap

Project Snapshot

1. This is the login page where user login to the system and get a JWT token which expires after a certain period of time. Later on, every time an API request is made from client end, the JWT token is sent in the HEADER and this token is received at the backend, user is validated and response is sent back as JSON data. Soon after the user login to the system, the token is stored in the localStorage of the browser as well in Store with the help of VUEX. The token could be retrieved at any time from the store.



Username

Password

Login

2. With the help of this User Interface, user can create new profile (**POST Request**). The UI consists of a header, consisting of menus for navigation, and a form. Using this form, new profile is created. Axios is used for integrating the API in the Frontend. Axios interceptor has been used to attach the token in the HEADER before API request is made from the client side.

Logo Dashboard Add Profile Logout

Add New Profile

Upload Photo
Choose File No file chosen

First Name **Last Name** **Date of Birth**

Apartment and Street Address **City** **State**

Select Country

[Save](#)

3. All the created profiles show up (**GET Request**) on the Dashboard screen as shown below. Profiles could be deleted (**DELETE Request**). When the EDIT button is clicked, it takes back to that form shown in No.2, call an API from the client side to retrieve information about that specific profile and all values in the form get filled up. From there, values could be changed and updated (**PUT Request**).

Project Benefit

The goal of developing this project was to learn about the basics of developing an entire web application from scratch using Object Oriented Programming principles. The project helped me to learn the basics of developing API using Spring Boot framework. It also helped me to get an idea about providing security to API accessibility using JWT token based authentication. JPA and H2 helped me to learn about taking the advantage of ORM and map data from MySQL database with the classes and objects. The practical implementation of Object Oriented Programming principles were also learned while developing this project where topics related to encapsulation, polymorphism, inheritance, interface etc. were covered through the project.