

# INF4041-WEB Programming

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## Introduction

In the frame of grade 4 web programming, we were asked to create a website which need to have many requirements:

- First of all, we must create an interface with HTML, CSS, Vue.js and the Web server built with Node.js and Express. Having already work on some web projects last year, we know the basics with HTML and CSS, but the other parts are unknown for us
- User authentication, we have some previous knowledge on it
- CRUD interactions with the server, again something new for us
- And at least deployed on Google Cloud Platform or Glitch,

We decided to create a website which offers many opinions and different kind of notation for a country. Those notations enable to know where tourists prefer to go in holiday and therefore to choose your next destination.

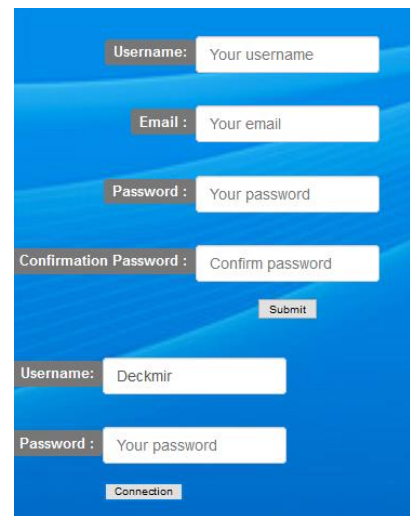


## Subject & Analysis

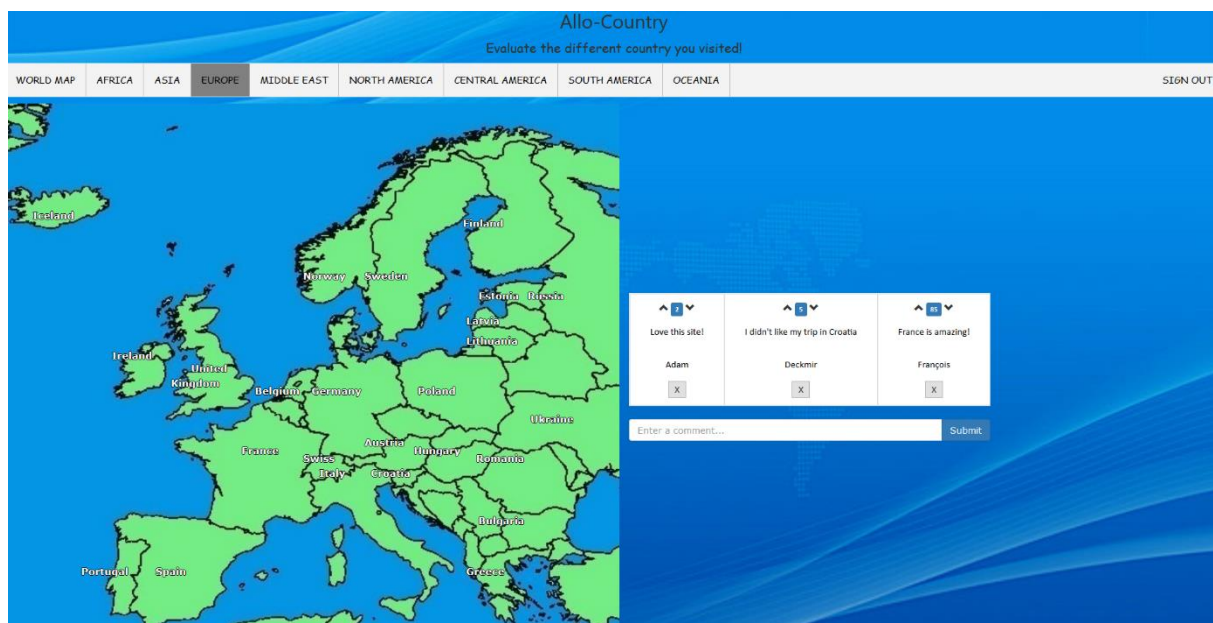
As we say before, our project is a web site where you can give your opinion and rate countries.

At first, you need to login or to register an account if you want to enter to the web-site (user authentication).

We did not want to let the user mark a country by selecting it inside a simple list. Letting him select a country on a clickable map was much more user-friendly so we decided to do so. When you click on one of the different continents, you arrive in another page where you can click on some country (made with Vue.js).



The image shows two separate login/register forms on a blue background. The top form is for registration, with fields for Username, Email, Password, and Confirmation Password, followed by a Submit button. The bottom form is for login, with fields for Username and Password, followed by a Connection button.



You can read and let a comment on the right side of the page. If you agree or disagree with one of this comment, you can vote to express your opinion on it.

You can also click on the many countries and rate them according to these criterions (CRUD interactions).

And we deployed it on Glitch.com



The image shows a rating interface for a country, specifically Spain. On the left, there are three criteria: 'Tourism', 'Food', and 'Price'. Each criterion has a five-star rating system and a 'Submit' button. On the right, there is a large image of the Spanish flag.

## Development Work

The construction of the website's front has been divided in two parts.

- HTML/CSS

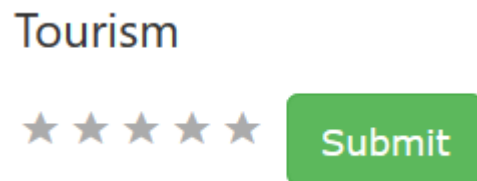
Concerning the visual aspect of the website, we wanted to display the name of each country on the top of his geographic limit. But how to create a such structure? The first idea we had was to use areas on an image and limit each country by its coordinates, but this job was tedious. So, we decided to lay a table containing the name of all the country in front of a background image. The complexity of that task was to find where to demarcate each line and each column.

We still had to find a way to make sure that the table and the image would stay at the exact same position whatever the size and the dimension of the screen are. To solve this problem, we used the view-width and the view-height measurement that force each item to fill a defined percentage of the page.

We also use Bootstrap to improve the design of our work.

- Vue.js

We use Vue.js each time we need to create an object which need to be edited. For the notation star, the template of Vue.js was very useful and overall, it wasn't very complicated to adapt a classic Javascript and a Vue.js script.



- Node and Express

It wasn't easy to use but the different tutorial was complete and for what we have to do, it was enough.

## **Different difficulties**

When we worked on this project, we had many difficulties:

-As we say before, we had a problem with the visual aspect of the website. It took a lot of time before we used the view-width and the view-height measurement. Even now, this solution is not very stable. If we want to improve this aspect, we will have to study a language /aspect of JavaScript but for this project we didn't have the time for this.

-We had some problems with the navigation bar when we assemble all the different pages in one HTML page and to understand how the mouseover works.

-We try to optimize some of our Vue.js script but we had some problems to connect this data with other Vue.js script. Same with the form, when the data arrives to the method POST, we couldn't use them for the other Javascript. We wanted to keep the comments and the different rates on our JSON but we didn't succeed.

-We had also some problems with Node.js and glitch.com. We lost a lot time to understand how we can use these.

## **Conclusion**

During this project, we built our own website about a subject we chose. We had the opportunity to reinforce our knowledge about three languages we already approached during the previous year and to learn about Vue.js and Node.js that facilitate all the elements we got to use. Bootstrap is also very useful to create nice pages.

Building the structure, the different features and planning the different steps were a valuable experience.