

COMSM0104-Web Technologies Report

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1 Introduction

Our team is comprised of Kehan Du (mz19460) and Shunyi Zhao (vt19049). The aim of our project is to construct the PC end official website of Deep KW Innovation Factory.

Deep KW Innovation Factory is the academic workshop of interdisciplinary at Huazhong University of Science and Technology, China. Since the establishment of Deep KW Innovation Factory in 2017, it has always upheld and practiced the concepts and methods of interdisciplinary, and insisted on exploring the question of social sciences by using natural science methods.

The central goal of this version is to construct of the official website framework and the dynamic realization of key pages and complete the initial launch of the official website. This version is just used to practice the skills of web technologies, and will not be used commercially. We have got the permission to do this website, and the final report will declare the copyright.

2 Page Design

The home page of this project is shown below:



Figure 1: home page and about page

3 Technology Evaluation

3.1 Estimation of marks

- A for HTML
- A for CSS
- A for JS
- B for PNG

- B for SVG
- B for Server
- B for Database
- B for dynamic pages
- 12 for Depth (out of 20)

3.2 Client Side

We chose a popular javascript framework, Vue.js (version 2.6.11), to develop these pages. Modularity and componentization are important features of Vue, allowing us to build complex applications with small, independent, and usually reusable components. And these components convenient for later maintenance and upgrade of the official website. We use webpack and npm manage the packages based on node.js, and information about these packages is shown in package.json. Works are placed in folder named `./src/components`. HTML, used as the template of every module, and CSS would control the layout and style of these modules.

Adobe Photoshop and Illustrator (Authorized) are used to design the blueprint of the website, and some .png file are created by them. Some icons, such as the logo of group, are drawn by SVG.

3.2.1 HTML

3.2.2 CSS

3.2.3 JavaScript

3.2.4 PNG

Some images used in this project are drawn with GIMP 2. One of the examples, texttable.png which is used in `Contact.vue`, is shown below in Figure 2.



Figure 2: Left: the image after adding three text objects. Right: add three rectangles with 48.0 opaqueness.

Firstly, we added three text objects into a 300×400 file, and then typed in some useful information. Then the coverages of these text objects are combined to fix the positions of them. The result of this stage is shown in the left image of Figure 2. And then, three rectangular layers are added, the result is shown in the right image of Figure 2.

3.2.5 SVG

3.3 Sever Side

3.3.1 Server

The development of Sever is also in node.js. We use `express` as the server framework.

3.3.2 Database

We choose `sqlite3` to manage our databases. We use four tables, including `candidata`, , in this project. The ER relationship of tables used in this project is shown below.

3.3.3 Dynamic Page