

Vietnam National University Ho Chi Minh City-VNU HCM

Ho Chi Minh City University of Technology

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WEB ASSIGNMENT

CV Design and management for a job website

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1. Introduction

In this report, we will present the design and development process of my website project, which aims to provide a simple and effective way for users to create their own CVs online. The website project is based on web design principles and best practices, such as responsive design, user interface design, and web accessibility. The website project also uses various web technologies and tools, such as HTML, CSS, JavaScript, PHP and MySQL.

The report will also include screenshots, diagrams, and code snippets to illustrate the design and development process of the website project. The report will conclude with a summary of the main findings and achievements of the project, as well as a reflection on the learning outcomes and the personal experience of working on the project.

2. Theoretical Foundations

2.1 The theoretical basis of HTML, CSS, and JavaScript

HTML stands for HyperText Markup Language, which is the standard markup language for creating web pages. HTML defines the structure and content of a web page, such as headings, paragraphs, images, links, etc. HTML uses tags to enclose different elements of a web page.

CSS stands for Cascading Style Sheets, which is a style sheet language for describing the presentation of a web page. CSS is used to customize the appearance of a web page, such as colors, fonts, layouts, animations, etc. CSS uses rules to apply style to HTML elements. For example, `h1 {color: blue;}` is a rule that sets the color of the heading element to blue. CSS can be written in a separate file and linked to an HTML file, or embedded in an HTML file within a `<style>` tag.

JavaScript stands for JavaScript, which is a scripting language for creating dynamic and interactive web pages. JavaScript is used to add functionality and behavior to a web page, such as validating user input, manipulating HTML elements, responding to user events, making web requests, etc. JavaScript uses statements and expressions to perform tasks and calculations.

2.2 Bootstrap framework

Bootstrap is a popular framework for building responsive, mobile-first websites. It provides ready-made design templates and components for HTML, CSS and JavaScript. It also supports customization and theming. With Bootstrap, you can create modern and attractive web pages without writing too much code.

2.3 PHP and MySQL

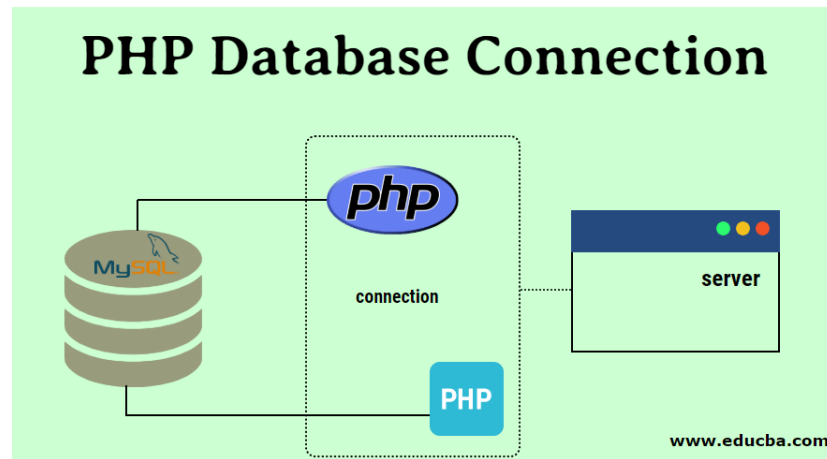


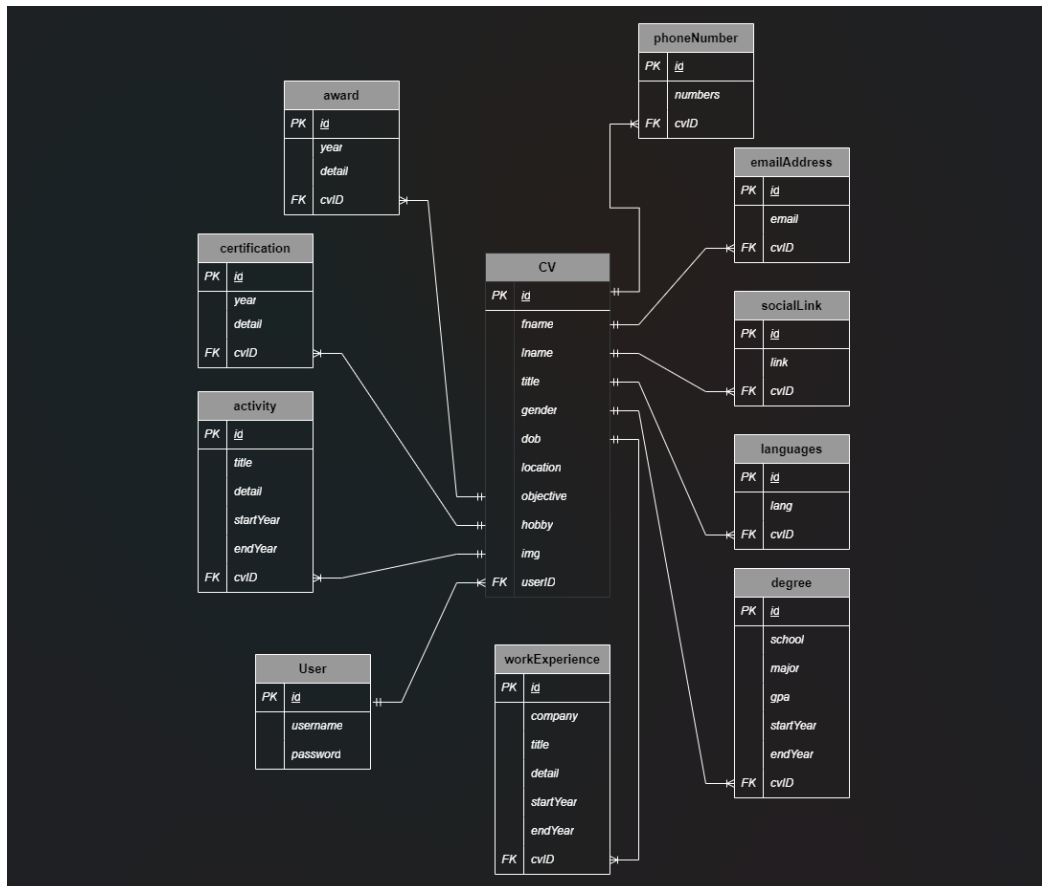
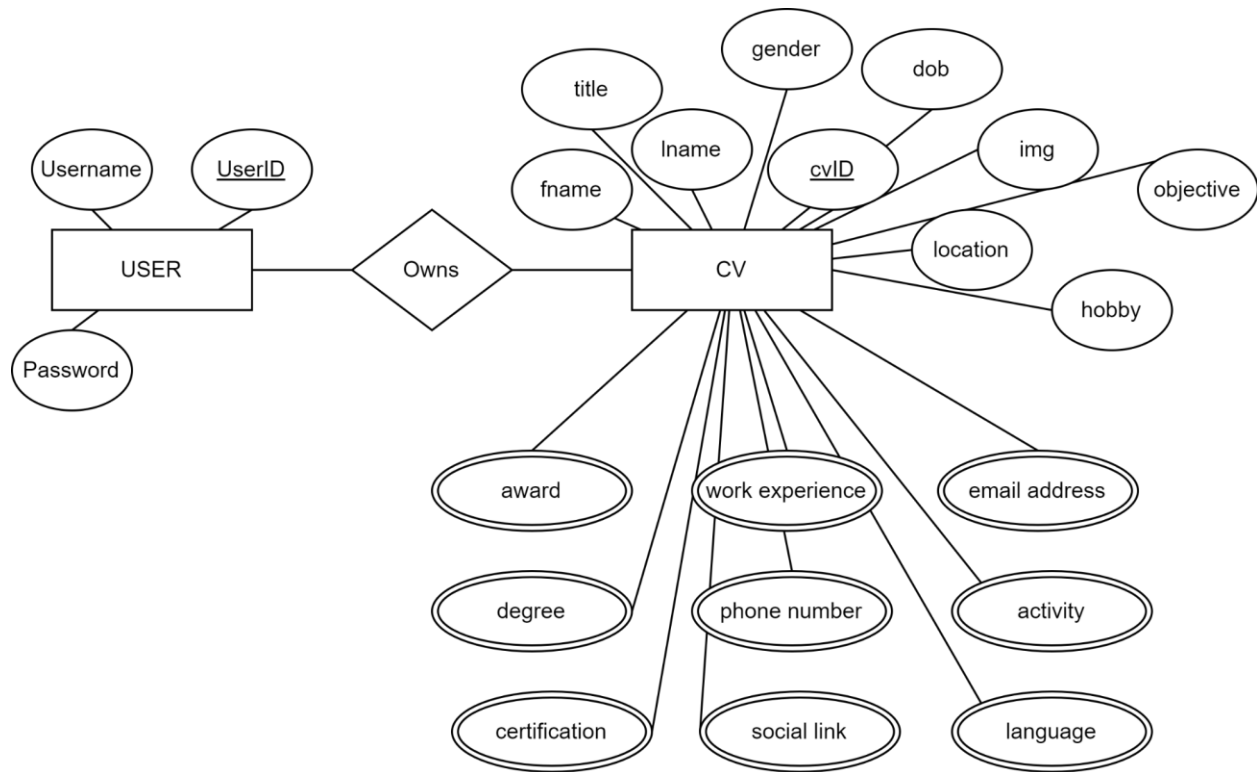
Figure 1: PHP and mySQL

PHP and MySQL are two open-source technologies that are widely used for web development. PHP is a server-side scripting language that can create dynamic web pages. MySQL is a relational database management system that can store and retrieve data.

3. Application design

a. Database design

After a research process, we came up with this ER Diagram for the Database.



The website's database structure revolves around users managing multiple CVs. Each CV comprises personal details as essential attributes of the CV entity, alongside various other information such as awards, degrees, emails, and more. These additional details are considered multivalued attributes of the CV entity since a single CV can encompass multiple entries of these categories.

b. URL routing section

We used an index page as a controller for every user. The index page defines an array of valid pages and corresponding filenames to redirect users. Furthermore, we also used a .htaccess file to route all requests toward the index file.

c. Create resume section

The design of our form stack offers a seamless vertical arrangement for users, facilitating the input of multiple attributes with an intuitive add/remove feature for multivalued fields. Additionally, to streamline the process, a submit button enables users to create a new CV by sending the form data to the database. For image uploads, we've opted to store user images locally on the server, ensuring simplicity in implementation.

In terms of user experience, backend validation precedes any SQL operations, ensuring data integrity. Error messages generated during validation are promptly relayed to the frontend, where they are displayed in user-friendly toasts. This approach aims to notify users of any erroneous inputs effectively, enhancing the overall usability of the website.

d. Login/ Register section

The website's functionality necessitates user registration and login to access its services. Upon registration, user credentials (username and password) are securely stored in the database with encrypted passwords. Following successful login, a session cookie is generated for each user, containing their userID and username. This cookie facilitates various functions such as creating, updating, viewing, and deleting CVs. Session cookies



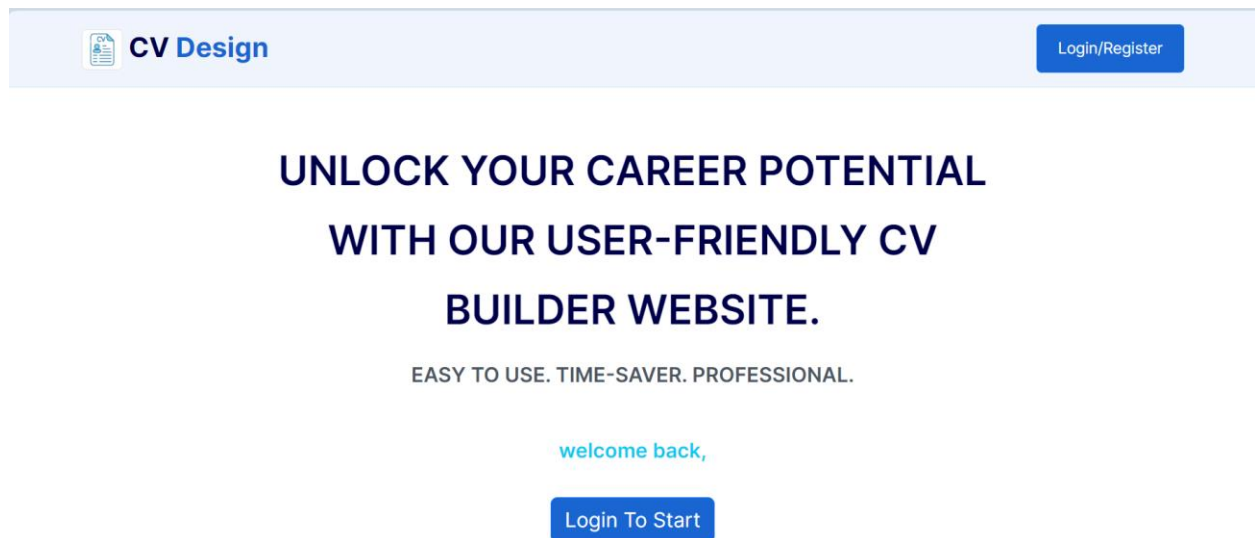
are designed to expire upon logout or after a specified duration. Access to createCV, updateCV, and viewCV pages is restricted to logged-in users only. Furthermore, the website's user interface dynamically adjusts based on login status, modifying paths and buttons accordingly to enhance user experience.

4. Introduce website

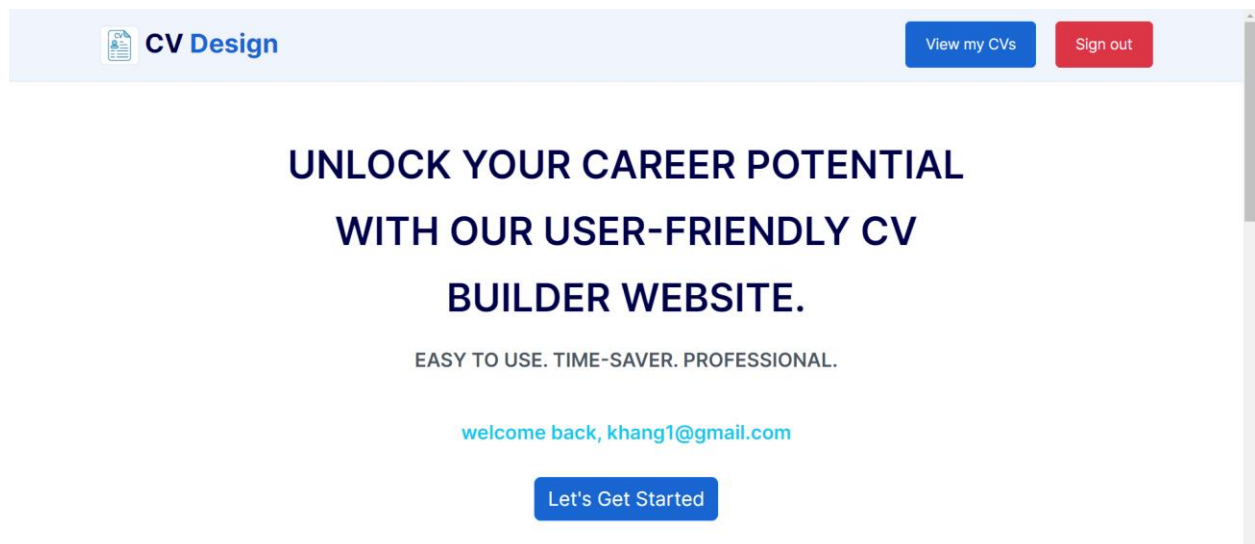
*Link github: <https://github.com/vinhkhangphung/web-assignment>

4.1 Home Page

You can click on login and register on the main page to login and register to my website.




Home page after login



You can select the template below to print your CVs

Here are the Best Templates for you

A great job application leads to a good interview. An amazing resume is what makes it all possible.



CV Design
CV design is a tool that helps users like you to create stunning CVs within 4 minutes


CV Design
Homepage
CV Design
CV Templates
Login

Legal
Privacy Policy
Use of Terms

Help Center
Contact: support@buildcv.com

4.2 Login and Register Page

User can login using the login page

 **CV Design**

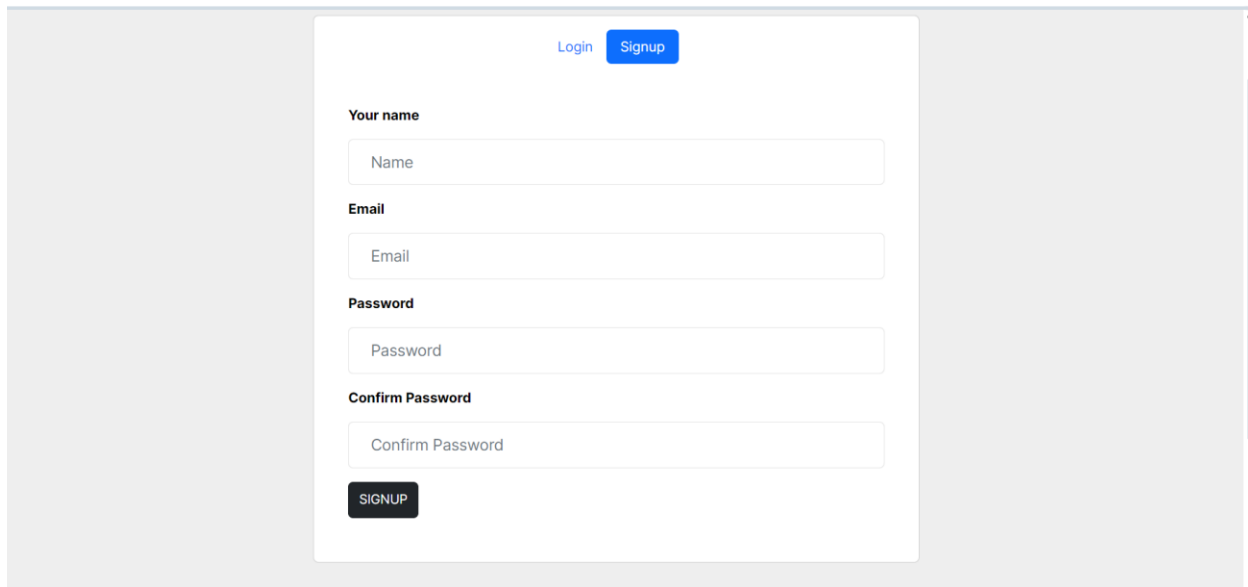
[Login](#) [Signup](#)

Email

Password

[LOGIN](#)

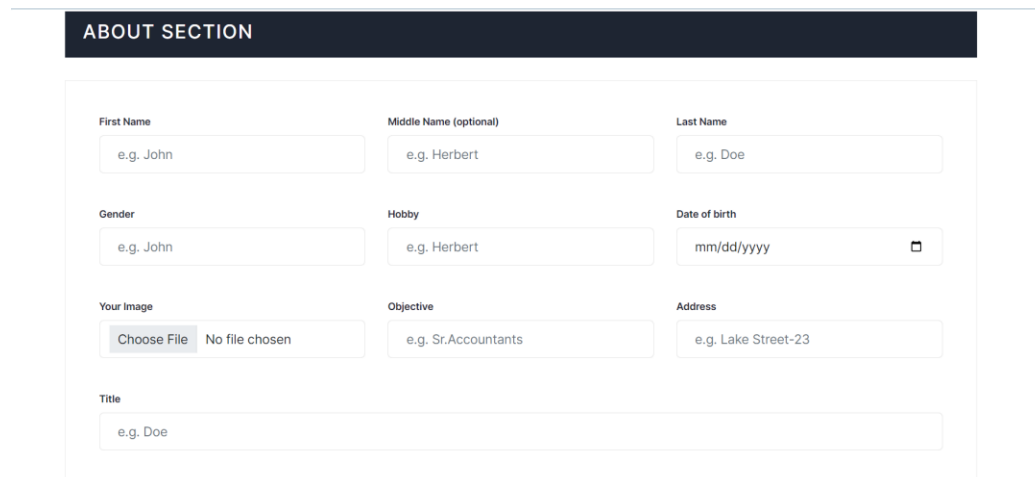
Users can create a new account using the sign up page.



The sign up form is a white card with a light gray background. At the top right, there are two buttons: "Login" (text) and "Signup" (blue). Below these are four input fields: "Name", "Email", "Password", and "Confirm Password". At the bottom left of the card is a dark gray "SIGNUP" button.

4.3 Create resumes Page

This is where you can enter personal information and complete your CVs.



The "ABOUT SECTION" form is a white card with a dark blue header. It contains several input fields: "First Name" (e.g. John), "Middle Name (optional)" (e.g. Herbert), "Last Name" (e.g. Doe), "Gender" (e.g. John), "Hobby" (e.g. Herbert), "Date of birth" (mm/dd/yyyy), "Your Image" (Choose File, No file chosen), "Objective" (e.g. Sr.Accountants), "Address" (e.g. Lake Street-23), and "Title" (e.g. Doe).

PHONE NUMBER

Phone No:

e.g. 456-768-798, 567.654.002

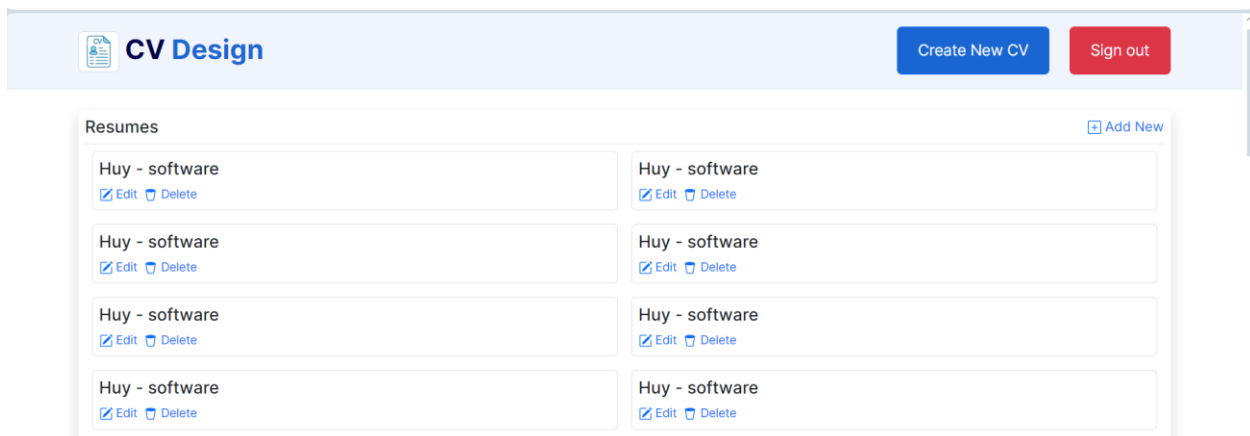
EMAIL

Email

e.g. johndoe@gmail.com

4.4 Manage resumes page

This is the place where you can manage your CVs. You can delete or edit your CVs at the Manage resumes page.




The screenshot shows the 'CV Design' interface. At the top, there is a header bar with the 'CV Design' logo on the left, and two buttons, 'Create New CV' and 'Sign out', on the right. Below the header, the main content area is titled 'Resumes' and includes an 'Add New' link. The resumes are displayed in a two-column grid. Each resume entry consists of a title 'Huy - software' and two action links: 'Edit' (with a pencil icon) and 'Delete' (with a trash can icon).

4.5 Edit Resumes

This page is where you can edit your CVs.



ABOUT SECTION



Huy Nguyen
Software Engineer
Summary

Account

First Name	Huy
Last Name	Nguyen
Gender	male
Date of Birth	2016-01-08
Hobby	football
Address	Quan 10

Edit

This is how we update languages.

LANGUAGE

Vietnamese

English

Arabic

Portugeese

+ Add one more language

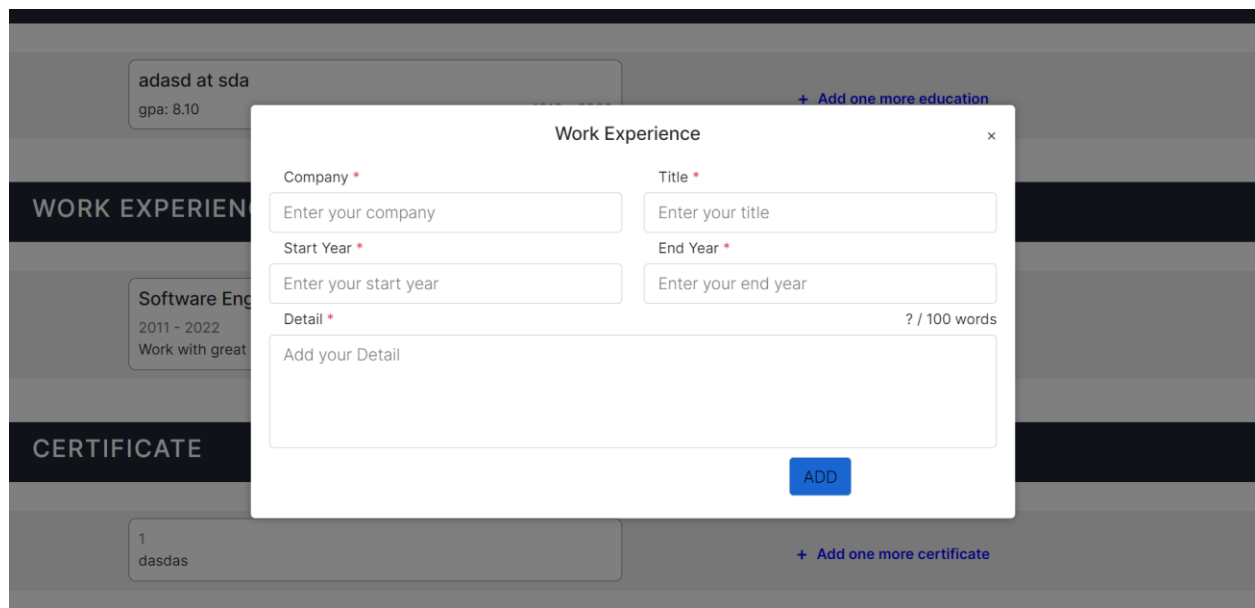
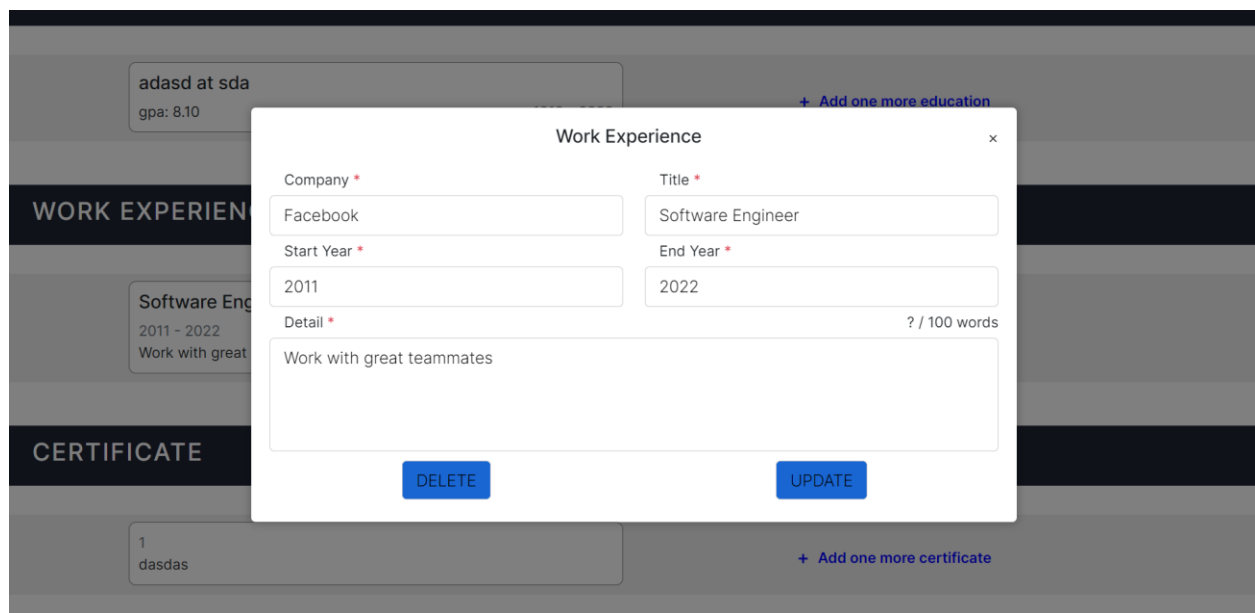
This is the work experience section.

WORK EXPERIENCE

Software Engineer at Facebook
2011 - 2022
Work with great teammates

+ Add one more work experience

We can manually click the card to update the information or click the add button to add new data.



5. How to install the application

- Copy the folder containing the source code (for example: named “web-assignment”) into *xampp/htdocs* folder.
- Start the Apache server module in Xampp Control Panel

- Start the MySQL module in Xampp Control Panel **at port 3306** (must be the exact port, otherwise the application cannot access the database) In case you cannot start the MySQL module at port 3306 (most likely because there is another MySQL process already occupied that port number), you need to do the following steps:
 - Go to the folder containing the source code, navigate the “*utility*” folder. Then go to the “*database.php*” file.
 - Change the configuration from “*\$port = 3306;*” to “*\$port = 3307;*”
 - Then go to the “*util.php*” file inside the same “*utility*” folder
 - Change the configuration from “*private \$port = 3306;*” to “*private \$port = 3307;*”
 - Notice that 3307 is an example port number. You can use any port that is available (not used by any other processes) on your computer.
- Open up your browser and navigate toward (assume that the folder containing the source code is called “*web-assignment*”): <http://localhost/web-assignment/index.php?page=home>
- Welcome, try to spend your time discovering our website.

6. Conclusion

In conclusion, the development of the job website's CV design and management function has been successfully achieved by implementing HTML, CSS, Bootstrap, and JavaScript. Through diligent research on CV structures and database design, we have effectively created a system capable of adding, editing, and deleting CVs.

Acknowledging the accomplishments, it's important to note that there is perpetual room for enhancement. While we've met the core requirements, there are avenues for improvement that can further elevate the user experience and functionality of the website.

Firstly, integrating token-based authentication would significantly enhance the security of the CV management system, ensuring that only authorized users can access, modify, or delete CVs. Additionally, implementing frontend form validation would bolster data integrity and user experience by validating user input before submission, reducing errors and enhancing overall data quality. Moreover, refining the responsive design by employing advanced CSS techniques or utilizing frameworks like Bootstrap to ensure seamless functionality across various devices and screen sizes would further improve the accessibility and usability of the website.

In essence, while the current implementation fulfills the fundamental requirements, the pursuit of ongoing enhancements remains a priority. By integrating token-based authentication, implementing frontend form validation, and refining responsive design, we aim to elevate the functionality, security, and user experience of the job website's CV management system.

7. Reference

- W3SCHOOLS: <https://www.w3schools.com/>
- Bootstrap 5 : <https://getbootstrap.com/docs/5.0/getting-started/introduction/>
- Color palettes: <https://colorhunt.co/>
- Google fonts: <https://fonts.google.com/>
- Icon: <https://fontawesome.com/icons>

8. Source code

Github: <https://github.com/vinhkhangphung/web-assignment/>

