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# My Digital Portfolio Website

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~~Student number: c22072738~~

~~URL of Website: http://c-22072738-cmt-120-cw-2-git-c22072738-mydigital-portfolio-apps-~~  
~~openshift.cs.cf.ac.uk/~~

## 1 Usability

This assignment mainly uses the Bootstrap framework to realize the Personal digital portfolio website, and cooperates with javascript, css and other technologies to provide users with a beautiful and practical interface. My digital portfolio website is a complete dynamic website with many perfect functions. The webpage is also deployed on openshift and can be directly accessed through the URL link. Entering the home page of the website is my personal information display page. On the right side of the homepage, my personal information will be displayed, including my skills, work experience, etc., and you can quickly understand my personal information through the display bar on the right. The website implements the account login function. Before logging in, the function of using the mailbox to register is also realized. In terms of login and registration, a lot of small functions have been implemented. For example, administrators can delete users or user passwords. Similarly, when users use their own accounts, they can upload avatars, post messages, etc., with A perfect account experience.

The most important thing is the article publishing section located in the middle of the homepage, which is also an essential function of the personal website. I myself can publish the website in the website for other users to read. This can include the following news information, technical blogs, and my personal skills display, etc., which is equivalent to multi-dimensional display of personal information in the form of articles. In the article, a lot of effort has been spent to improve this function. For example, the number of reading visits and likes of the article will be displayed and updated in real time, which has strong usability.

More importantly, a very practical function is that each account can comment on the article below the article. Similarly, I can also reply to comments myself, which is a very valuable and

practical function. Related to this is that both comments and replies will have message prompts, that is, when someone sends you a message, you can receive a prompt on your homepage to tell you that someone has replied or commented on you, which is also very practical. It is worth mentioning that when publishing an article, you can use markdown to write the article, and at the same time, you can add tags to the article and search for the text, so that you can quickly check the article you want to read.

## 2 Security

User data is the most important property of many websites, and it is very important to ensure the security of user data. Therefore, some work has been done on the security of the website to improve the data security of the website. Deleting data is very dangerous, and it will cause irreversible loss if done wrong. Therefore, we hope to impose some restrictions on the operator, such as only the user can log in and the user must be the user to perform the delete operation. First of all, this can be limited by extracting database account information and comparing. Furthermore, in the development process, in order to prevent CSRF attacks, certain security work has been done. A CSRF attack is also a cross-domain request forgery attack. A CSRF attack can be simply understood as: the attacker steals your identity and sends a malicious request in your name. Take deleting an article as an example: the user logs in to website A, the browser records the session and keeps the login status, and the user accidentally opens the evil attacking website B without logging out, attacking website B. Malicious code is implanted in the page, and a request to delete the article is quietly sent to website A. At this time, the browser mistakenly thinks that the user is doing the operation, and thus successfully executes the deletion operation. Due to the browser's same-origin policy, CSRF attackers can't get the actual content of your login data, but they can trick the browser into making malicious requests attach the correct login data.

The specific security policy is to delete articles using the POST method and verify the csrf token. The general process is: when a user visits the site, there is a hidden field 'csrf\_token' in the form that the website feeds back to the user. This value is randomly generated on the server side and is different every time. Before the backend processes the POST request, the background of the website will verify whether the 'csrf\_token' in the requested cookie is consistent with the 'csrf\_token' in the form. If they match, the request is legal, otherwise the request may come from a CSRF attack, and a 403 server access forbidden is returned.

### 3 Conclusion

In general, my digital portfolio website has a certain degree of usability and security. In terms of practicality, it realizes functions such as user registration and login, posting articles, deleting articles, posting comments, prompting notifications, etc. It is safe and convenient, and it defends against csrf attacks With sql injection attack, etc., it is practical, safe and fully functional.

### 4 Appendix A: list of advanced functionality

Registration and account login  
 Use Markdown to write articles  
 Publish and delete articles  
 Count the number of views and likes  
 Post comments and reply prompts  
 Database stores articles and account information  
 Sort articles according to time or popularity  
 Search article content by keyword  
 Display personal information on the homepage  
 Defense against csrf attacks and sql injection attacks

### 5 Appendix B: screenshots of website's pages

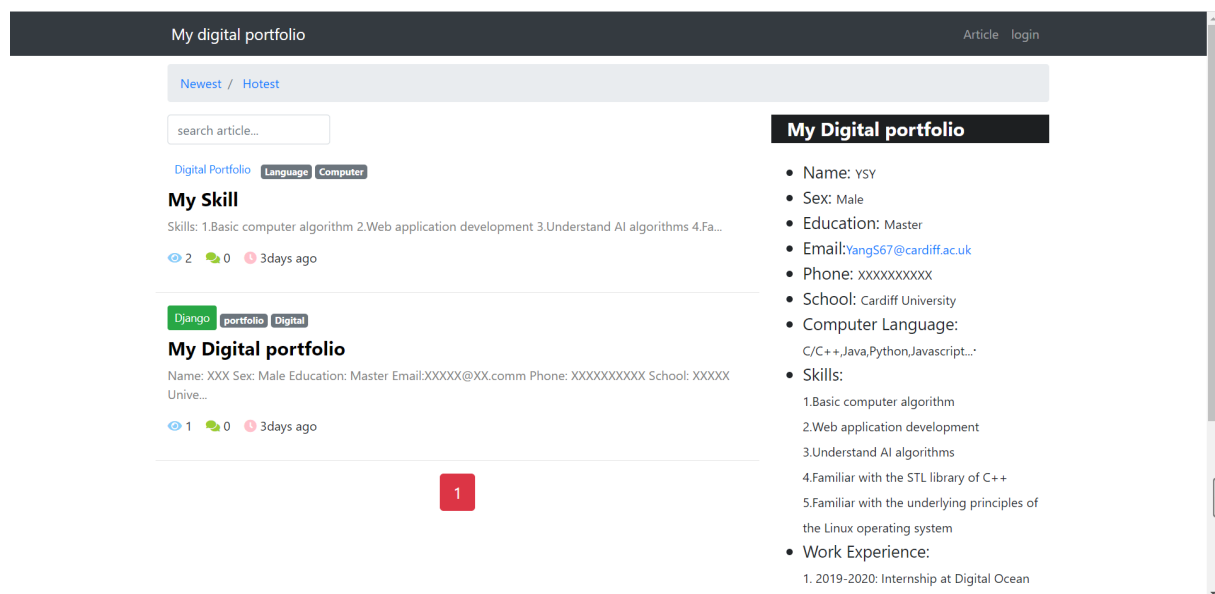
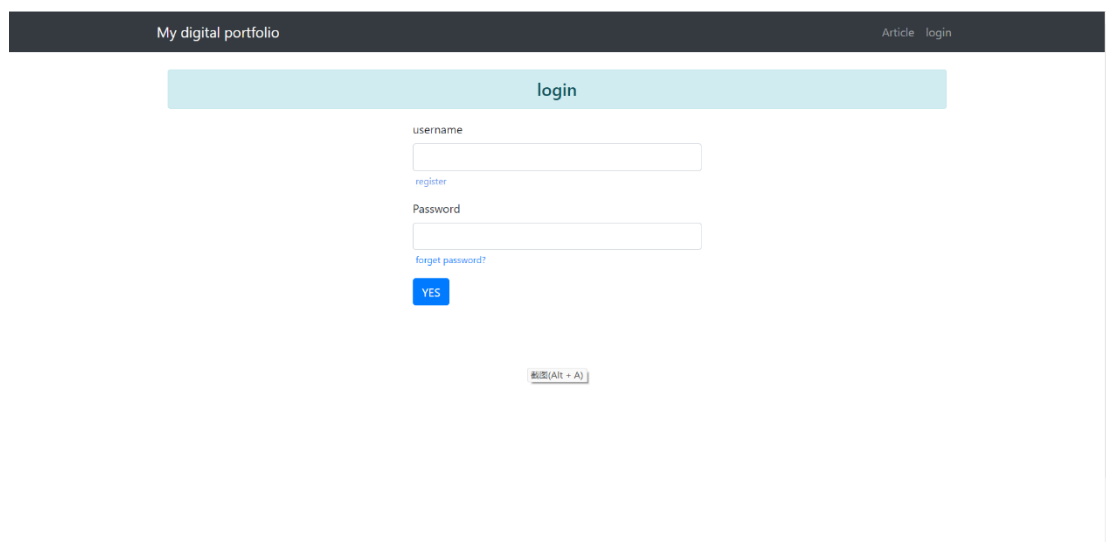
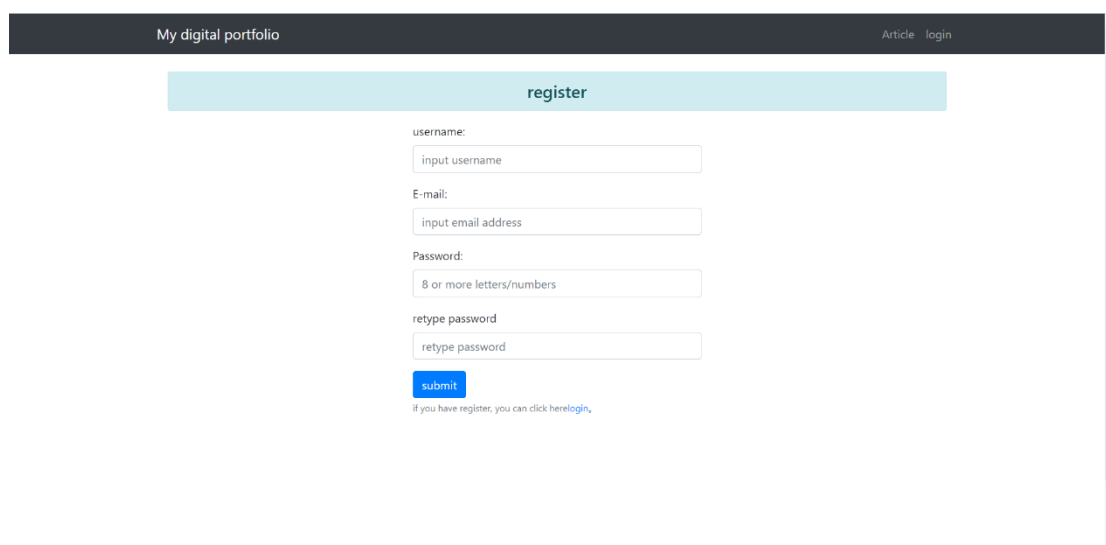


FIGURE 1



The screenshot shows a web browser window with a dark header bar. On the left, it says "My digital portfolio". On the right, there are links for "Article" and "login". Below the header is a light blue rectangular button labeled "login". Underneath this button, the form contains a "username" label followed by a text input field. Below the input field is a blue link labeled "register". Then, there is a "Password" label followed by another text input field. Below that is a blue link labeled "forget password?". At the bottom of the form is a blue button labeled "YES". A small keyboard shortcut indicator "Alt + A" is visible at the bottom center of the page.

FIGURE 2



The screenshot shows a web browser window with a dark header bar. On the left, it says "My digital portfolio". On the right, there are links for "Article" and "login". Below the header is a light blue rectangular button labeled "register". Underneath this button, the form contains a "username:" label followed by a text input field with placeholder text "input username". Below that is an "E-mail:" label followed by a text input field with placeholder text "input email address". Then, there is a "Password:" label followed by a text input field with placeholder text "8 or more letters/numbers". Below that is a "retype password" label followed by a text input field with placeholder text "retype password". At the bottom of the form is a blue button labeled "submit". Below the "submit" button is a small line of text: "if you have register, you can click here[login](#),".

FIGURE 3

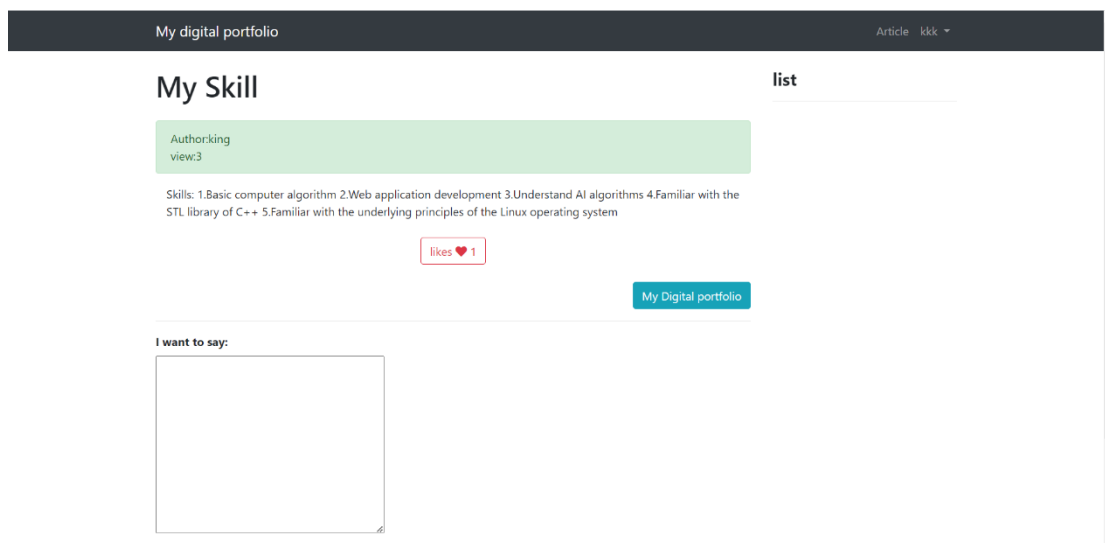


FIGURE 4



FIGURE 5



FIGURE 6

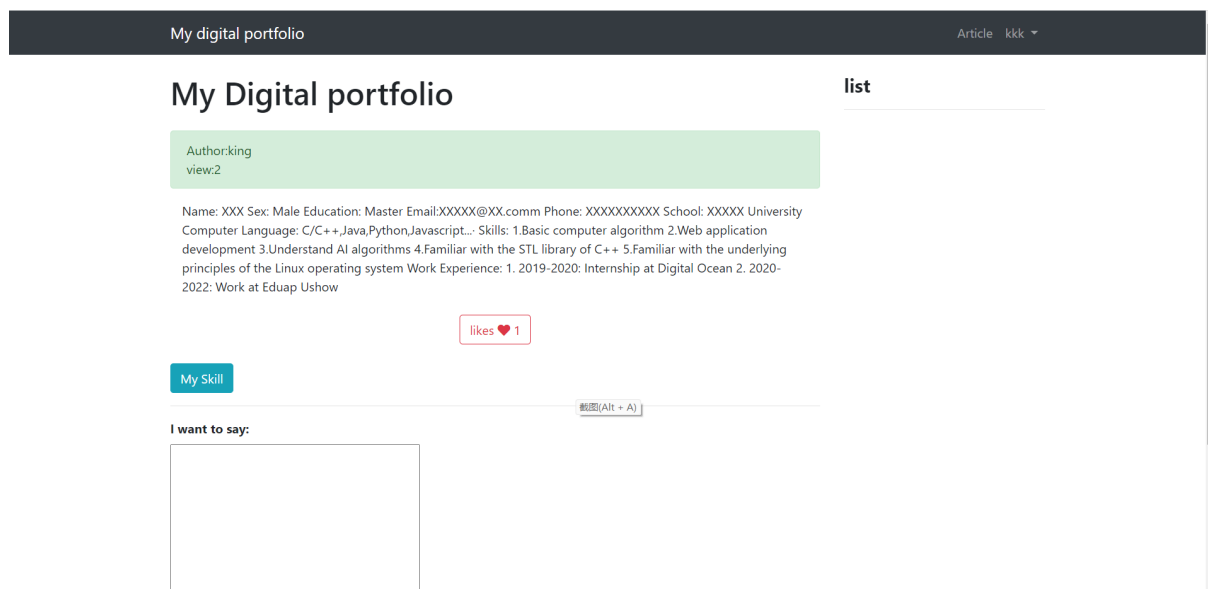


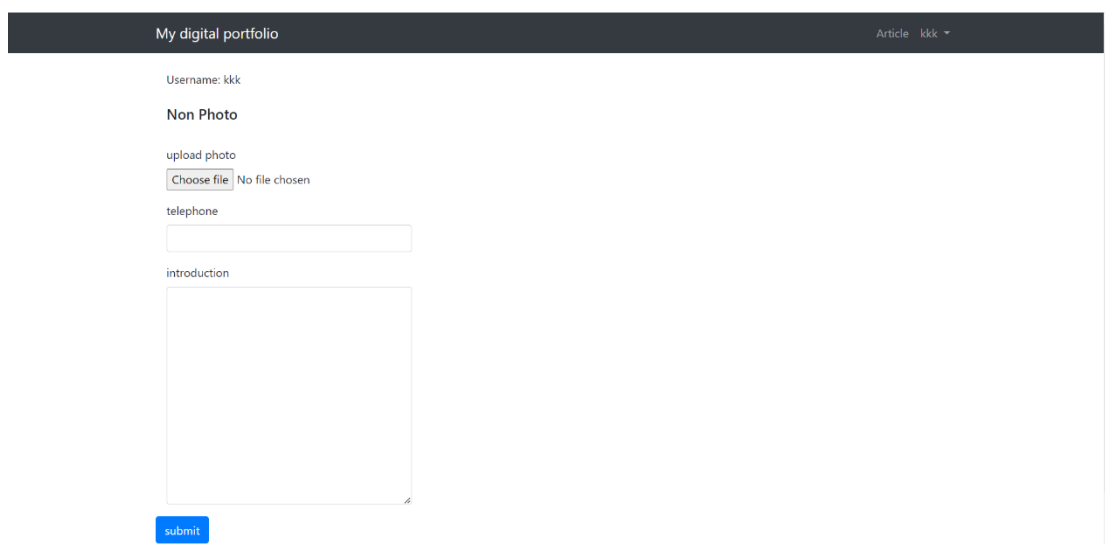
FIGURE 7



A screenshot of a web form for article submission. The form is contained within a light gray border. It includes the following fields and elements:

- article title**: A text input field.
- column**: A dropdown menu with the text "choose column..." and a downward arrow.
- tags**: A text input field.
- text**: A large text area for the article content.
- completed**: A blue button located at the bottom left of the form.
- Copyright**: A dark gray footer bar at the bottom of the page with the text "Copyright © YangS67@cardiff.ac.uk 2023".

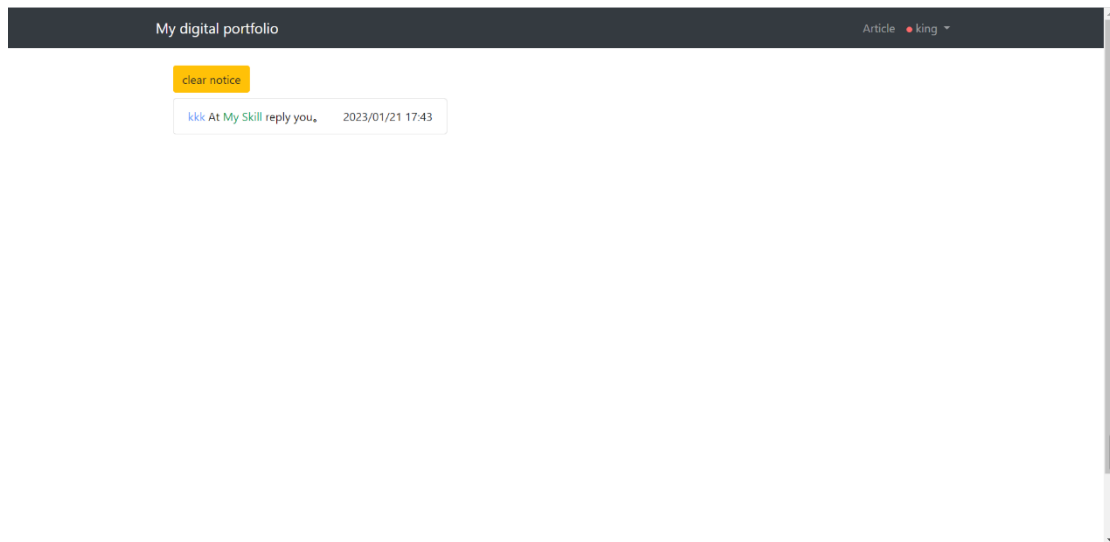
FIGURE 8



A screenshot of a user profile page titled "My digital portfolio". The page has a dark gray header bar with the title on the left and "Article kkk" on the right. The main content area is white and contains the following elements:

- Username**: A label followed by the text "kkk".
- Non Photo**: A section header.
- upload photo**: A label followed by a file upload button labeled "Choose file" and the text "No file chosen".
- telephone**: A label followed by a text input field.
- introduction**: A label followed by a large text area.
- submit**: A blue button located at the bottom left of the form.

FIGURE 9

**FIGURE 10**