

Computer Science/Software Engineering Programme

Sino-British Collaborative Education

CDUT

Debate Forum

Date: 2021-1-2

Student number: 201918010201

Class: L5C2

List of Content

Debate Forum.....	1
1. Introduction.....	3
1.1. Purpose of the project.....	3
2. Accessibility measures.....	3
2.1. Accessibility measures.....	3
2.2. Intended users.....	4
2.3. Any additional accessibility features.....	4
3. Mobile phone user adaptation.....	5
3.1. Changes.....	5
3.2. The means.....	5
4. Test for both of functionality and accessibility.....	5
4.1. Test plan.....	5
4.2. Results.....	7
4.3. Fixes.....	9
5. JavaScript Framework Implementation.....	10
5.1. How to modify the site to work within this framework.....	10
5.2. What different it would make to implementation of the site.....	11
6. Conclusion.....	11
7. Reference.....	11

1. Introduction

1.1. Purpose of the project

The purpose of this report is to describe a accessibility measures to a project, target users, how it fits into the mobile, project testing and JS framework sections. This project is a debate forum, which allows users post different topics and post their claims to support or against, while simultaneously replying to other claims or replies.

2. Accessibility measures

2.1. Accessibility measures

Text substitution: Web pages are made of text, and buttons have text (text is not "button", which is button function).

Adaptable and easy to distinguish :HTML tags are clear and no color is used to indicate key points. The overall color of the site is given priority to with black characters on white background, with obvious contrast and no text images.

Operability: Links and buttons can interact, and users can use the site for unlimited time. The user can type with a keyboard. There are no flickering objects or elements that can trigger seizures, such as red. Correct navigation and links, and search capabilities (**extra**).

Comprehensible: the site is basically composed of text, no load of graphics to photos, very easy to understand.

Compatibility: Can be accessed on devices of different sizes.

2.2. Intended users

1. The blind man.
2. The deaf.
3. Color blindness patients.
4. People with movement disorders.

2.3. Any additional accessibility features

HTML and CSS files are kept separate, which helps simplify code and improve accessibility. The layout of the website content is simple and clear, each part is separated by a border, and the text and the border is black, the background is white, the contrast is clear and easy to read. Topics and reply pages use AJAX to reduce the number of times users reload the page and increase convenience(**extra**). A small number of JavaScript files are used to reduce the damage to the web style when the browser cannot read JS files(**extra**).

3. Mobile phone user adaptation

Here are some ideas about how the web fits into different sizes of mobile devices like phones.

3.1. Changes

The menu bar becomes more compact than the one on the computer. Other parts of the block became narrower and longer. Try to align the blocks vertically rather than horizontally.

3.2. The means

Limiting the minimum or maximum width of a block is the most common approach.

Set a suitable minimum width to prevent elements from stacking when the user enlarges the screen too much. Set a suitable maximum width to avoid having too few messages spread out horizontally. Try to align different elements vertically, for example, with the post response button below the text box.

4. Test for both of functionality and accessibility

4.1. Test plan

1	Whether the first page of the site is a list of topics
2	Click on each topic to jump to the corresponding topic page and show all claims of this topic

3	Sort claims by publication time
4	Click on each claim to jump to the corresponding topic page and show all replies of this topic
5	Sort claims by publication time
6	Topics, claims, and reply all show the publisher and when it was published
7	Topic and claim are link-able
8	Users can create accounts with a username and password
9	Users can log in with the correct user name and password
10	The login button is in the corner of the page, and a login popup window will pop up when clicked (extra: Animation)
11	After creating an account, users can post topics, claims and replies
12	When Posting a topic, fill in the title and description
13	When Posting claims, fill in the title and description
14	User information, topics, claims and replies are stored in the database
15	Site contrast is clear
16	Does not rely on color to indicate emphasis
17	No images are used to illustrate the point
18	Is the button easy to understand
19	The content of page can be displayed correctly on devices of different sizes.
20	Search (extra: Search)
21	Admin can delete or edit topic, claim and reply(extra: Admin)
22	Whether the above tests can be done in the Edge browser

23	Whether the above tests can be done in the Chrome browser
24	If the user is not acting properly, there is a warning popup window
25	When administrators delete or modify claims, the page is updated in real time using AJAX without reloading (extra: AJAX)
26	When publishing claims, users can select the relationship with other claims.
27	When publishing replies, users can select the relationship with other replies or claims.
28	When claim is posted, the page is updated in real time using AJAX without reloading (extra: AJAX, Live)
29	The comment of the reply will be displayed to which reply it is.

4.2. Results

1	The front page is a list of topics
2	Can jump correctly and display the corresponding content correctly
3	Claims can be sorted in either positive or reverse chronological order
4	Can jump correctly and display the corresponding content correctly
5	Replies can not be sorted in either positive or reverse chronological order, and click sort button will jump to topic page.
6	The publisher and publication time can be displayed
7	On the Topic page, each claim can be clicked and jumped. On the Claim page, the corresponding link in the navigation bar can be jumped to the topic page to

	which the claim belongs
8	User can create an account using a username and password and the account will be stored in the database, but if username is existing it won't give warning.
9	Can log in by the correct user name and password, but if username or password is wrong it won't give warning.
10	If the user is not logged in, the login button is in the corner of the page and a login pop-up window pops up when clicked. If the user logs in, the login button in the corner becomes a UI button (extra: Animation)
11	After the user creates an account and logs in, the add button will appear on the home page, topic page and Claim page respectively and jump to the corresponding post page
12	Post a topic can fill in the title and description
13	Post a claim can fill in the title and description
14	The user name and password, topic title, content and post time, claims title, content and post time, and the content and post time of reply are stored in the database
15	Each page uses black text on a white background, and each of the different parts of the border color is also black. The contrast of each page is very sharp
16	No special colors to emphasize the point
17	The site doesn't have any pictures
18	Buttons have button function text, such as "Add a topic"
19	The navigation bar has stack of elements

20	Can type a word to search for topic title, claim title and claim content, each of them will be displayed by there title (extra: Search)
21	Admin can delete or edit topic, claim and reply(extra: Admin)
22	Can do this in the Edge browser
23	Can do this in the Chrome browser
24	If the user is not acting properly, there is no warning popup window
25	When administrators delete or modify claims, the page is updated in real time using AJAX without reloading (extra: AJAX)
26	When publishing claims, users can select the relationship with other claims.
27	When publishing replies, users can select the relationship with other replies or claims.
28	When claim is posted, the page is updated in real time using AJAX without reloading (extra: AJAX, Live)
29	The comment of the reply will be displayed to which reply it is.

4.3. Fixes

5	Rewrite the code about reply part in claim page, and modify the code for sort function in app.py file.
19	Set the minimum width of the navigation bar to avoid element stacking.

8,9	Cannot fix the bug that warning message cannot be displayed.
-----	--

5. JavaScript Framework Implementation

The JavaScript framework which I choose was Bootstrap, which is the most popular framework of front-end(Bootstrap, 2021). Bootstrap has lots of useful elements, such as, responsive grid system, JS plugins and extensive pre-built components(Bootstrap, 2021).

5.1. How to modify the site to work within this framework

There are three different type of use Bootstrap. The first way is to download compiled Bootstrap code of CSS and JS, and add them into html file like use local .css or .js file before. The second and the easiest way is using CDN by jsDelivr. It just like add a link label to the html file,which skip the download step. The third way is using source files, which contains all build tools, and download other compiler, for example, Sass compiler, to help user to modify the website. Package managers is also used to install and manage CSS or JS file of Bootstrap. Users can easily build a website quickly based on the classes or plug-ins provided by Bootstrap.

5.2. What different it would make to implementation of the site

With Bootstrap, you can easily render complete content on different sizes of devices, and your site will look pretty and uniform. At the same time, the construction time of the website will be greatly shortened. Since Bootstrap already has many matching styles and JS built-in in different classes, users can easily apply Bootstrap by adding the same class name to their corresponding div.

6. Conclusion

This report fully describes the debate forum accessibility measures and target users, as well as how the forum web pages adapt to mobile phones or computers of different sizes of devices, how to test the project testing and JS framework section.

7. Reference

1. Bootstrap. (2021) Build fast, responsive sites with Bootstrap. Available at: <https://getbootstrap.com/> (Accessed: 20 Nov. 2021)
2. Pallets. (2021) Welcome to flask. Available at: <https://flask.palletsprojects.com/en/2.0.x/#> (Accessed: 20 Nov. 2021)