

# **Back-end Web Development**

## **Production journal**

### **Introduction**

In this project, we used a current industry-standard content management system (Wordpress.org) to create a website for The Tocumwal Archive. We applied the SCRUM methodology and Trello to manage our “sprints” and projects. Then we deployed WordPress on SiteGround and it is free for students to use for the first year in this project. The most important part is connecting my local coding to our team member. Therefore, I created a repository on GitHub to store the coding and share it to Maggie. Then I connected the GitHub to WordPress. So the WordPress can automatically update from the repository. This report demonstrates my contribution to this project and the whole process of developing this website.

### **What is Content Management Systems?**

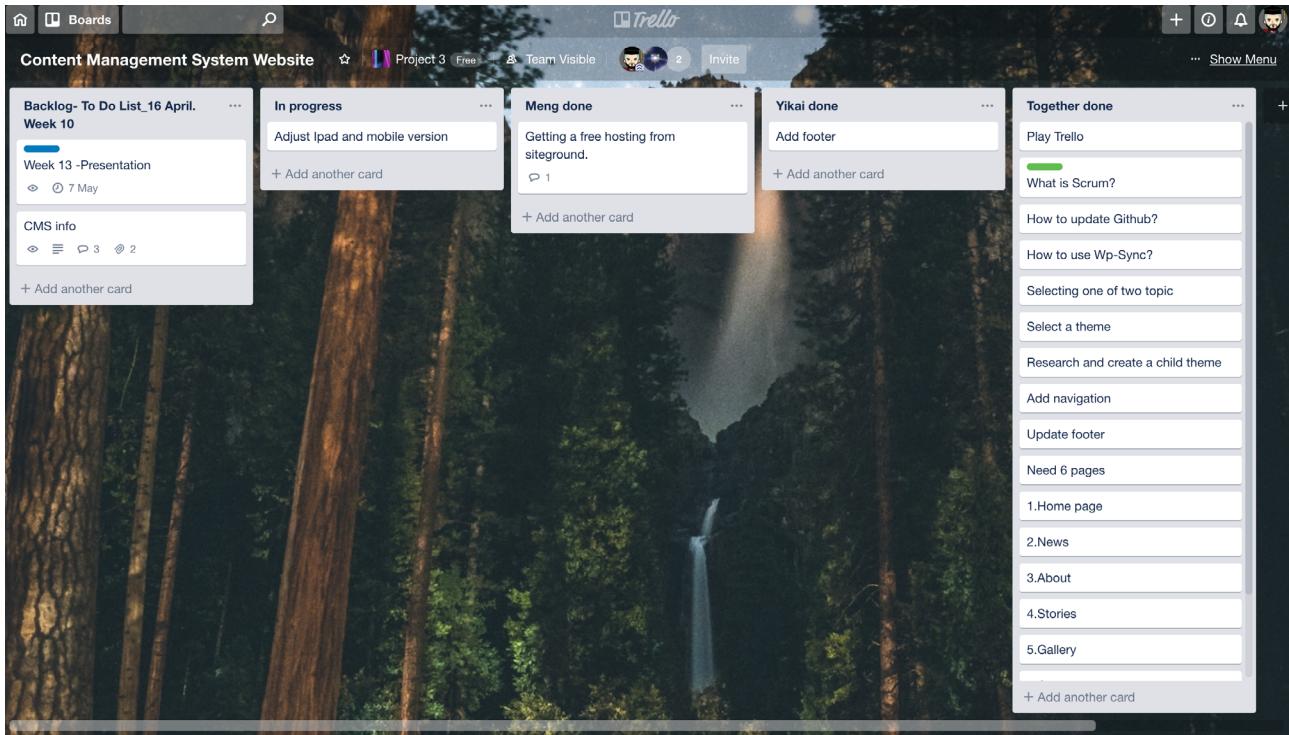
According to SearchContentManagement, “A content management system (CMS) is a software application or set of related programs that are used to create and manage digital content” (Rouse, 2016). In this project, I selected WordPress.org as the content management system as it is a popular open source CMS on the internet, and I can find and install a number of plugins on WordPress.org.

### **SCRUM methodology and Trello workflow**

Scrum is an agile methodology or framework to manage software development. We applied this framework to the development process. There are 3 main artifacts, roles and events of SCRUM way. Firstly, I created a sprint backlog – Backlog, to do list. This is a list of the tasks to perform during the sprint. Our grouping meetings include 3 events. We talked about our project plan, what we did, and how to do, so many questions. There are just two members in our group, Maggie and me. In this Scrum process, Maggie and I play the roles of the development team as we create this website together. However, I also am the scrum master of our team. I draw up the outline and assigned sprints to team members.

Also, Trello is a productivity platform lets our work more collaboratively. It enables us to organize

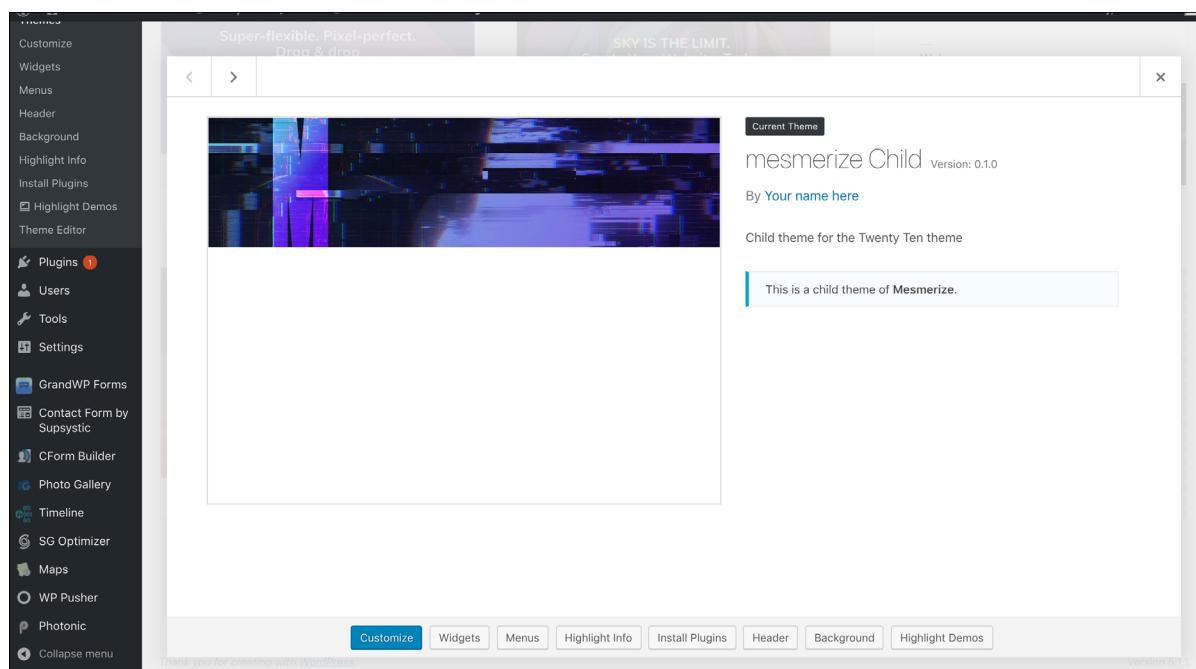
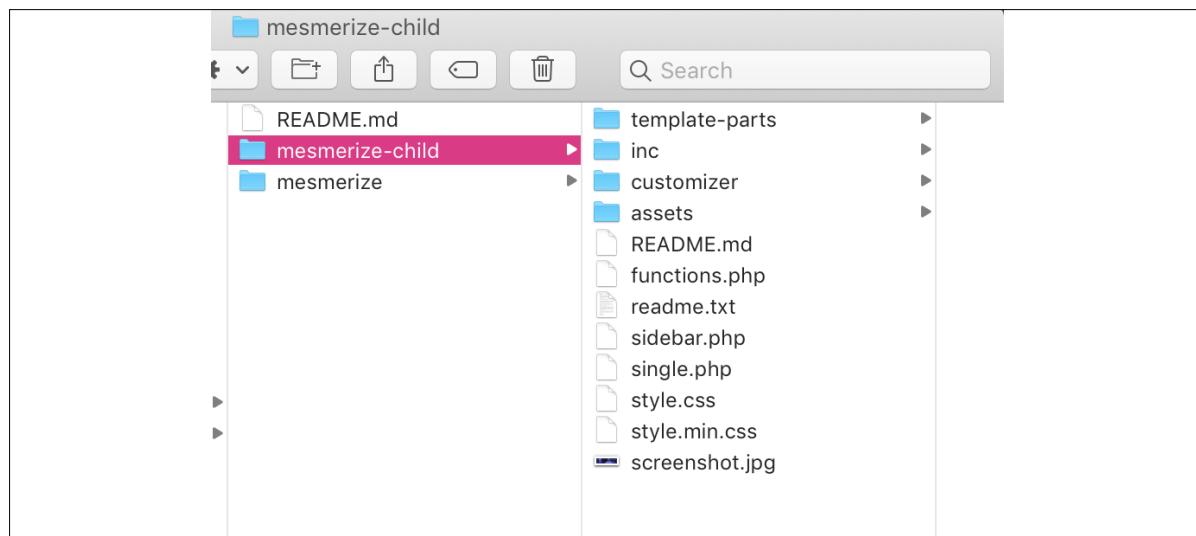
and plan our development process. I created a board and named it content management system website. Then invited Maggie to this board. I added 5 lists on this board followed by Scrum methodology. They are Backlog- To Do List, In progress, Maggie done, Yikai done and Together done. We can easily organize our project and quickly see the current progress. Particularly, I downloaded the iOS Trello so I can check the process anywhere. Moreover, I also applied Trello to other projects in my life and it is a powerful list-making application.



- YIKAI LI moved Spam from Backlog- To Do List\_16 April. Week 10 to Together done**  
a minute ago
- YIKAI LI moved Search from Backlog- To Do List\_16 April. Week 10 to Together done**  
a minute ago
- YIKAI LI added Search to Backlog- To Do List\_16 April. Week 10**  
a minute ago
- YIKAI LI added Spam to Backlog- To Do List\_16 April. Week 10**  
a minute ago
- YIKAI LI moved Adjust Ipad and mobile version from Together done to In progress**  
1 May at 21:42
- YIKAI LI moved Adjust Ipad and mobile version from Backlog- To Do List\_16 April. Week 10 to Together done**  
1 May at 21:42
- YIKAI LI added Adjust Ipad and mobile version to Backlog- To Do List\_16 April. Week 10**  
1 May at 21:41
- YIKAI LI moved Need 6 pages from Backlog- To Do List\_16 April. Week 10**
- YIKAI LI on CMS.info 27 Apr at 15:22**  
Cms666222  
Cms666@@@
- YIKAI LI moved Research and create a child theme from Backlog- To Do List\_16 April. Week 10 to Together done**  
22 Apr at 16:38
- YIKAI LI added Research and create a child theme to Backlog- To Do List\_16 April. Week 10**  
22 Apr at 16:38
- YIKAI LI moved Select a theme from Backlog- To Do List\_16 April. Week 10 to Together done**  
22 Apr at 16:36
- YIKAI LI moved Update footer from Backlog- To Do List\_16 April. Week 10 to Together done**  
22 Apr at 16:36
- YIKAI LI moved Add navigation from Backlog- To Do List\_16 April. Week 10 to Together done**  
22 Apr at 16:36
- YIKAI LI on CMS.info 22 Apr at 00:40**  
Sitetground  
u3166303@uni.canberra.edu.au
- YIKAI LI on CMS.info 22 Apr at 00:37**  
Github  
<https://github.com/u3166303/UC-canfly>
- YIKAI LI attached Github**  
<https://github.com/u3166303/UC-canfly> to CMS.info 22 Apr at 00:37
- YIKAI LI added CMS.info to Backlog- To Do List\_16 April. Week 10**  
22 Apr at 00:37
- YIKAI LI added Add navigation to Backlog- To Do List\_16 April. Week 10**  
22 Apr at 00:33
- YIKAI LI added Update footer to Backlog- To Do List\_16 April. Week 10**  
22 Apr at 00:33
- YIKAI LI added Select a theme to Backlog- To Do List\_16 April. Week 10**  
22 Apr at 00:33
- YIKAI LI moved Selecting one of two topic from Backlog- To Do List\_16 April. Week 10 to Together done**  
21 Apr at 23:46
- YIKAI LI moved How to update Github? from Backlog- To Do List\_16 April. Week 10 to Together done**  
21 Apr at 23:46
- YIKAI LI set Week 13 -Presentation to be due 7 May at 12:00**  
16 Apr at 21:05
- YIKAI LI added Week 13 -Presentation to First group meeting, 16 April. week 10**  
16 Apr at 21:04
- YIKAI LI archived list Week 13 - Project presentations 7 May**  
16 Apr at 21:04
- YIKAI LI moved Play.Trello from First group meeting, 16 April. week 10 to Together done**  
16 Apr at 21:02
- YIKAI LI moved Getting a free hosting from siteground. from First group meeting, 16 April. week 10 to Meng done**  
16 Apr at 21:02
- YIKAI LI added Together done to this board**  
16 Apr at 20:59
- YIKAI LI added Yikai done to this board**  
16 Apr at 20:59
- YIKAI LI added Meng done to this board**  
16 Apr at 20:59

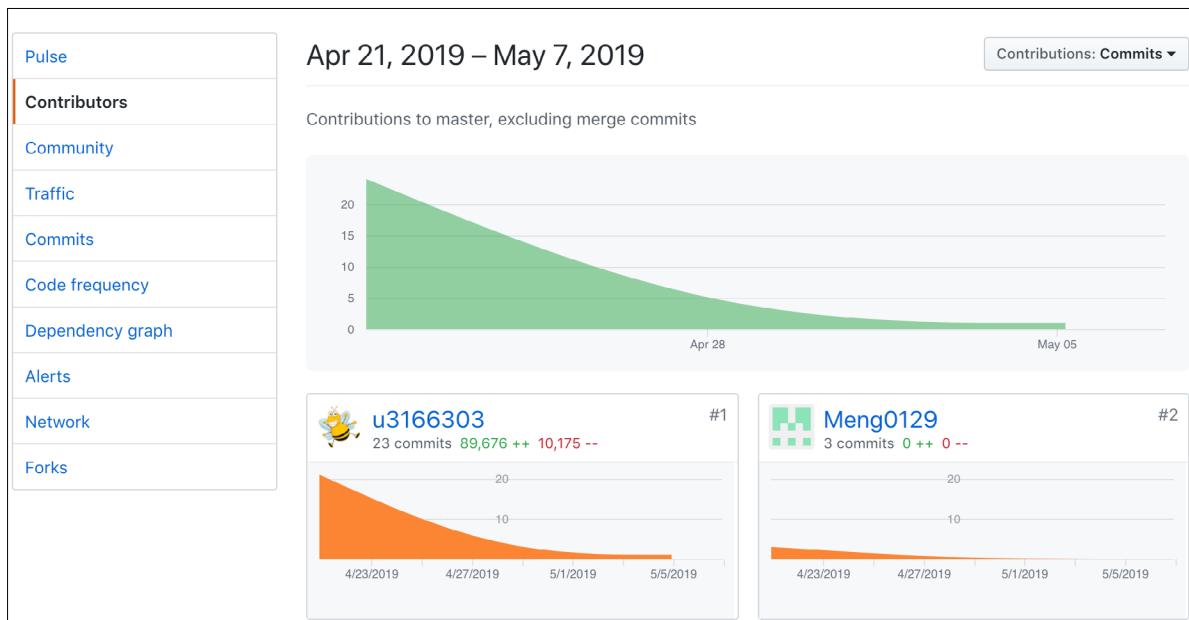
## Theme development Child theme SiteGround Hosting

I used my student email address to sign up a free account on SiteGround then installed WordPress on it. Therefore, our website can be accessed from a URL. The next step is selecting as a theme for The Tocumwal Archive. We compared many themes on WordPress. Then decided to use Mesmerize as it has lots of customization options. In addition, I created a child theme of the parent theme. Then I upload my child theme to GitHub and active the child theme on the admin panel of WordPress.org. Therefore, most of the changes are made in the child theme in the next steps. This allows me to change small aspects of our site's appearance.

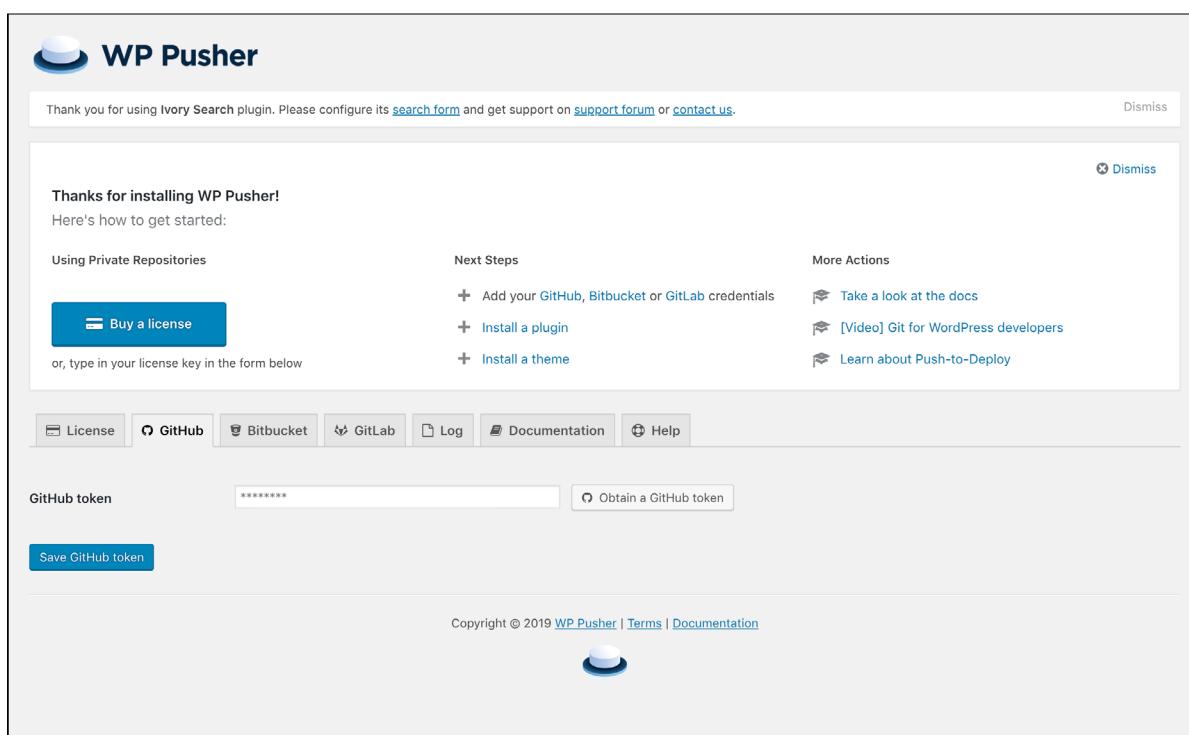


## Share GitHub

I created a new repository and named it UC-can-fly on GitHub. Then pushed my local WordPress coding online. The next problem is how to share these files with my partner. I followed the instruction on Moodle to complete this. I add Maggie as a collaborator to UC-can-fly. As a result, we had the repository together.



We do not like to manually update our coding on GitHub and WordPress. This feature can be implemented through a plugin. I installed WP Pusher on my WordPress. Also, I need to get my GitHub token to access it. Then the WordPress can update automatically once I change my local file and push to the repository.



## 6 pages

Totally there are 6 pages on our website. I am the responsibility for creating News, Story and About page, navigation and footer. Firstly, I change the footer in functions.php of the child theme folder. I replaced the text and add a hyperlink. So visitors can jump to the library resources page by clicking [ACT Heritage Library Manuscripts Collection].

```
192 function highlight_get_footer_copyright($copyright, $preview_atts)
193 {
194
195
196
197     $copyrightText = __('This website was produced by Maggie and Yikai in the Faculty of Arts & Design,  
University of Canberra. <br>  
The content is extracted from the Tocumwal Houses Archive in the %s', '[ACT Heritage Library Manuscripts  
Collection]');
198
199
200
201
202
203     $copyrightText = sprintf($copyrightText, '<a target="_blank" href="%1$s" class="mesmerize-theme-link">[ACT  
Heritage Library Manuscripts Collection]</a>');
204
205     $copyrightText = sprintf($copyrightText,
206         'https://www.library.act.gov.au/find/history/search/Manuscript_Collections/hmss_0074_tocumwal_houses_archi  
ve');
207
208     $copyright = '<p ' . $preview_atts . ' class="copyright">&copy;&ampnbsp' . "&nbs;" . date_i18n(__('Y',  
'highlight')) . '&nbs;' . esc_html(get_bloginfo('name')) . '.&nbs;' . wp_kses_post($copyrightText) .  
'</p>';
209
210     return $copyright;
211 }
```

We need to have an interactive map on About page. So, I installed the Maps plugin on my WordPress. Then I create a Google API key from Google APIS. They give me \$400 and a 1-year trial. I just need to set up a map in the plugin and copy the shortcode into About page to display it.

The screenshot shows two side-by-side WordPress dashboard pages. On the left, the 'WP Google Maps' settings page is displayed, showing a map of Tocumwal, Australia, and a shortcode input field containing '[wpgmza id="1"]'. On the right, the 'Google APIs & Services' dashboard shows a new API key named 'API key' with restrictions for 'None' and API restrictions for 'Don't restrict key'.

Furthermore, I added Ivory Search to WordPress. Then visitors can search our pages and news.

The screenshot shows the 'Ivory Search' settings page in the WordPress dashboard. It displays configuration options for search forms, including 'Includes' (Default Search Form), 'Excludes', and 'Options'. The 'Post Types' section lists various post types with checkboxes for selection. A sidebar on the right provides links to documentation, support, contact us, and rating options.