CP3402 Project

Keagan Chisnall, Engineering Managers at Safety Culture recently told our IT@JCU students:

What I look for in candidates for joining my team and recommending them to other teams in Safety Culture is pretty simple (and stolen from Google): Curiosity and persistence. Everything else can be taught.

Curiosity is similar to passion, but it goes further - it's the ability to become passionate about things you have no idea on. It's the ability to start while knowing nothing and finding enjoyment in discovery.

Persistence is the other critical ingredient - While we can all be somewhat curious about things, we all inevitably find the wall between having above average knowledge and really becoming an expert in something. Most will turn around at that point (which may be prudent), but when there is a need to climb that wall, that is where persistence comes in.

Ideally we'd love to see examples of that - what interests have you found, learned, and mastered? That is what is required in the real world to be top of your game and working for the best companies - an office full of people who love to learn and have the drive to become the best in it when that is what is needed.

This group project is designed to give you opportunities to develop your curiosity and persistence; to give you challenges that require a team to overcome; to give you exposure to real-world skills for in-demand jobs; and ultimately to make you more employable. Embrace these challenges as valuable learning opportunities and decide now at the outset to do what it takes to become the kind of person who loves to learn and has the drive to become the best.

Project Website (40%)

Task:

You will work in a team of 4 people to develop and deploy one website using WordPress for a client. Project management and "devops" are key aspects of this assignment. Your site must be designed using your own custom theme that you develop based on an appropriate "starter theme". As described in the details below, your group must create, test and document an appropriate modern collaborative development and deployment workflow for this project.

Design:

You should perform all the standard design steps like information architecture, interface design and information design. All design decisions are up to you except for anything specified as a requirement by the client. Your design should be appropriate for your client's goals and target audience. You will develop your theme from a starter theme that is basically blank, meaning you will style and layout the site from scratch.

Note that the custom theme (not child theme) you create should be a complete and reusable WordPress theme following the standards, not one hard-coded specifically for this site. Test this with a new/dummy site to ensure it's done correctly. Use Theme check plugins to help check/fix this.

Content:

Most content will be provided by the client. You should modify and improve any provided content as appropriate for the site goals. It is likely that there will be small sections of your site that would benefit from new content that you can reasonably write by yourself, but you are not expected to create much new content or do substantial editing. While you may use extra content including images not provided by the client, you must comply with any legal requirements for commercial use. Your final site content should be suitable for the goals/audience/client.

Documentation:

Your team must produce industry-style documentation using markdown files in your main GitHub project repository with the goal of helping future developers and site maintainers. This is non-trivial and should provide enough information that someone could actually follow your guides successfully. A strong suggestion is that you write and update this documentation as you develop and deploy your site so that you can "eat your own dogfood". Do not recreate existing documentation for WordPress, Vagrant, Docker, etc.

You need to create the following 4 files:

- **deployment.md** – Describe your development and deployment workflow in enough detail that a new team member or someone taking over the project could follow to successfully develop theme updates locally, then test and deploy them to your staging and live sites. This should include aspects such as project management, version control, testing and automation. Do not provide private details like passwords.
- **theme.md** – This page should help a new developer to continue developing your theme. Include relevant information about what features your theme has, files that would need editing, design decisions, colours, etc. You do not need to produce a serious design document or reproduce basic details about WordPress theme development, only what is specific to your theme.
- **site.md** - Think about someone (perhaps the client) who already knows WordPress taking over the running of the site itself: how do they add new content – as a page or a post? In what category? You may have used a plugin for a calendar of events or something, which needs to be described. Do not recreate WordPress documentation, but clearly explain to the client's site maintainer how this particular site is organised and can be updated.
- **README.md** – it is standard for GitHub repos to have this file as an overview that displays when you go to the root project URL. Include this for completeness with a basic overview and links to the other documentation files.

LinkedIn Report:

The intention of this LinkedIn report is to help *you* reflect on how the subject has improved your employability – and to plan for this throughout the subject. Completing this report thoughtfully will increase your visibility to potential employers and enrich what you learn in the subject.

Individually, you need to write a report and place it on your **LinkedIn** profile under "**Projects**" that effectively summarises this project, highlighting the technologies and tools used, the skills you developed and the role/s you performed. Include links to the LinkedIn profiles of rest of your team (that's a feature of Projects on LinkedIn, not something you just put in the text). The size of this report is constrained by what fits in a LinkedIn Project. Think about the context and goal to help you decide how long or short to make it.

It is not sufficient to include a list of technologies you used or vague terms like "project management skills". Your report (like any good communication) needs to be goal-focused. A good idea is to write this in first-person voice and include relevant examples of how your skills were used in specific ways during the project. Think about the potential employer reading it. What hurdles did you overcome? What are you now good at? What stories can you tell of how you succeeded that would indicate you would be good to hire?

In their 2018 report, *"Employability in a Global Context"*, Smith, M., Bell, K., Bennett, D., & McAlpine, A. talk about a similar teaching approach that *"helped students align what they were learning with opportunities within and beyond the core curriculum"*, which *"avoided the tendency to have students 'tick the competency boxes' … and instead challenged students to plan and reflect on the process and outcomes of their experiences 'in a more meaningful way ... talk about the skills you developed, how they related to what you were learning inside the classroom, how it would enrich what you were learning ... put the pieces together'."*

Rather than writing this report quickly at the end of the project, you should work on it as part of your weekly learning journal throughout the project. Your journal should focus on the skills you're developing and your final report can use what you have written in your journal.

Project Management:

You must use project management and communication tools as part of your development workflow, both to facilitate your group project work and as a way for your lecturer/markers to evaluate your contribution to the project. Your team will be added to a **Slack** group for communication; you will be given GitHub repos (see below), and you can use (public) **Trello** or **GitHub Projects** as your project management 'board'. These should be integrated together effectively. If you prefer to use different tools, this must be approved by your lecturer. Discord is acceptable instead of Slack, but you need to provide links in your Slack group, and you need to invite your markers to your group/server.

In general, if a tool is good/suitable and visible to markers then it's acceptable – but please check first.

Login to GitHub, then create or join your group's GitHub repos using these GitHub Classroom links:

- Site/theme: https://classroom.github.com/a/piQXzeJB
- (optional) Environment: https://classroom.github.com/a/nK4W_4At

If you are the first in your group to create the GitHub repo, then when asked for your repo name, it should be the same as your Slack group team number so that it's easy to find you (e.g., "team34"). This will give you, your team and your lecturer/markers access to your repository without having to worry about adding collaborators. You only need to put your custom theme folder or wp-content folder under git (don't include core WordPress files). It should be kept up-to-date throughout the project. **Every** team member must commit to this repository so that there is evidence of each member's contribution.

Your production and staging sites must be published on different public Web servers. It is up to you to choose something appropriate, but you are not expected to pay any money for hosting. Consider the options listed in the subject resources, all of which have free/student tiers available. Do not use SiteGround or your own personal server as they are not suited for a group project like this. You must use hosting that will still be up/visible for at least 6 weeks after submission.

Peer Assessment:

You need to complete a peer assessment via CATME (the link will be provided later) where you evaluate yourself and every member of your team, which will be used to handle any cases of inequity. This is also a useful reflection activity. **This peer assessment is mandatory and students who do not complete the peer assessment will receive zero marks for this assignment (and therefore fail the subject).**

Students who "freeload" by letting other team members do an unfair portion of the work will have their marks reduced. Students who do not manage the teamwork aspects effectively (e.g., are unnecessarily difficult to work with) will have their marks reduced even if they do a lot of work.

There will also be an early peer assessment to check in with teams and to get used to using CATME.

If there are problems in your group that you cannot work out together, please discuss this with your lecturer early on. Do not wait too long to deal with any issues.

Integrity:

The work you submit for this assignment must be your own. You will use content provided by the client. You are allowed to discuss the assignment with other students and get assistance from your peers, but you may not do any part of anyone else's work for them and you may not get anyone else to do any part of your work. Work that is too similar to another group's work or work from an outside source will be dealt with promptly according to University procedures for handling plagiarism. For this assignment, it is acceptable to use free resources from appropriate sources and modify them to suit your project, but you may not use anything in a way that infringes copyright or other laws. You should cite the original source in your documentation (a2.html file).

Note that your theme must be developed from a "**starter theme**" (like underscores, WP Rig, etc.), which is a theme designed specifically to be used for creating a new theme. You may not start from a theme that has significant design and functionality ready-made beyond what a starter theme has.

Marking Scheme:

Ensure that you follow the processes and guidelines introduced in class to produce high quality work. This rubric provides you with the characteristics of exemplary to very limited work in relation to task criteria.

Criteria	Exemplary (9, 10)	Good (7, 8)	Satisfactory (5, 6)	Limited (1-4)	Very Limited (0)
Publishing 8%	Site is available, up-to-date and working in production, staging and local environments (show local in a2.html)	Site is available in production and local development, but not staging	Site is available in production and staging but not local development	Site is only available in local development or production	Site is not available anywhere
Content 4%	Site content is complete and accurate; text and media are all well-integrated		Site content is incomplete; not all media are present or not well-integrated		Minimal or poor site content; not all media are present
Goal-Driven 4%	Goals of the site are clear in the design and calls-to-action are well used		Design has some goal-orientation, but mostly misses the opportunities to lead users; calls-to-action are not evident		There is no sense of the site design being goal-driven
Information Architecture 4%	Content has been thoughtfully organised to be suitable for site goals; navigation is intuitive		Not all content is well-organised; navigation is not always intuitive		Content placement seems illogical; navigation is difficult
Information Design 4%	Text has been formatted to be suitable for scanning and for site goals; images enhance meaning of text	Exhibits aspects of exemplary (left) and satisfactory (right)	Some content is well-formatted but not all, e.g. some text needs to be made more scannable; images are not well-used	Exhibits aspects of satisfactory (left) and very limited (right)	No evidence of thoughtful information design; content appears to be untreated
Interface Design 12%	Design is professional, consistent, suitable for site goals and audience		Design is not suitable for site goals and audience, obvious inconsistencies across different pages		Poor quality design, not suitable for site goals and audience, or not using custom theme
Theme 8%	Theme development is complete; structure and theme follow WordPress standards and guidelines; theme is reusable (no hard-coded content)		Theme development is incomplete; problems with structure or code not following standards and/or guidelines, and/or reusability problems, e.g. hard-coded content		No custom theme developed (e.g. child theme used)
Version Control 8%	Version control used properly - multiple commits by all team members, decent messages, no duplicate files in different folders		Version control used but not well, e.g., insufficient commits or limited commit messages or not all team members have committed		Version control not used at all
Project Management and Communication 12%	Use of tools is very good, with evidence of consistent effort and meaningful communication; project management process is robust and effective		Use of tools is not good enough, with evidence of inconsistent effort and minimal communication; project management process is not effective		Project management tools not used at all or not visible to marker
Documentation 16%	Documentation is complete, covering all expected areas for development, deployment and maintenance; without		Documentation is mostly complete and/or contains errors making it harder than need be for someone else to		Documentation is mostly incomplete or incorrect

	error and well-written; it would be easy for someone else to continue to develop and deploy the site;		continue to develop and deploy the site		
LinkedIn Project Report *Individual mark – per student* **20%**	Report is well-written, goal-driven for employability, and effectively summarises the project, highlighting the skills used/learned and the role/s performed; correctly links to the rest of the team		Report is mostly complete but is not well-written, lacks promotion and/or doesn't highlight roles and other team members		Report is mostly incomplete or incorrect

Note: rubric percentages will look different on LearnJCU due to how LearnJCU handles separate rubrics that get combined (group and individual). The totals are the same.

Presentation (10%)

Your group must record a **7-10 minute** video demonstration and justification of your chosen **development and deployment workflow**. Your group will research, test, decide on and use a modern process for collaborative development and deployment considering best-practice issues such as project management, version control, testing and automation. Continuous Integration / Continuous Deployment (CI/CD) is a significant part of modern development processes (devops). This is not just about getting your site online but rather about learning valuable skills for in-demand job roles.

You will use this workflow for developing your WordPress site and theme, then present the process and your analysis and justification of it (pros and cons, insights learned). In your analysis, discuss multiple options that you considered and tried and describe why you chose your final process. That is, you cannot just describe what one thing you did; you must test and evaluate multiple options.

Note that your presentation is NOT about designing your actual site, the client, etc. – just the workflow.

Format:

Record and submit your presentation as a video file. If it is longer than 10 minutes, re-do it. Use something that allows you to present both your screen and cameras so we can see each person as they speak as well as the visuals. In keeping with the philosophy of the subject, you are welcome to use whatever you wish. Zoom or Google Hangouts can be good for this. In the past some students created excellent presentations using Discord and OBS (Open Broadcaster Software).

Every member of your group must participate and talk (ideally fairly equally) in the presentation.

A key part of your presentation is a **live demonstration** of how you can update your site theme in a local environment, use appropriate version control, and efficiently update a live site. This should include both theme code and database content, and include staging and production.
Make sure you prepare a realistic (not "blah blah") change to demonstrate... and practise it!

Marking Scheme:

Criteria	Exemplary (9, 10)	Good (7, 8)	Satisfactory (5, 6)	Limited (1-4)	Very Limited (0)
***Content & Quality of Workflow* 24%**	Workflow effectively covers project management, version control, testing and automation; local, staging and production environments are used	Exhibits aspects of exemplary (left) and satisfactory (right)	Workflow misses or poorly covers one or two of project management, version control, testing and automation; local, staging and production environments are used	Exhibits aspects of satisfactory (left) and very limited (right)	Workflow is incomplete, missing most of the expectations; missing one or more of the expected environments
***Comparison of workflows* 24%**	Multiple workflows and tools are effectively compared and the decision is clearly justified including		Multiple workflows and tools are compared; the decision is mostly justified including some coverage		Only one workflow considered; no/minimal comparison or justification

Criteria					
	evaluation, testing, overall rationale		of evaluation, testing, overall rationale		
Visuals and Demonstration **12%**	Demonstrations are effective and well planned. Use of visuals enhances the presentation and meaningfully connects with the content being presented.		Demonstrations are passable but not realistic or not well executed. Visuals don't always line up with the talk or the presentation lacks visuals that would enhance it.		Demonstrations are missing or messy. Visuals are poor.
Structure **12%**	Students present information in a logical sequence which audience can follow. Strong introduction and conclusion.		Presentation sequence makes it harder for audience to follow than it should be. Introduction and/or conclusion are not strong.		Poor sequence of information means audience cannot understand presentation. Start and finish are very weak.
Group Work **8%**	Presentation is shared well, each person's part logically flows, contributing to one coherent well-organised presentation.		Presentation is not shared evenly, each person's part is separate, changeovers are a bit messy.		Not all members contribute and/or sharing is problematic.
Delivery Style *Individual mark* **20%**	Student maintains eye contact, seldom returning to notes. Clear voice and good pronunciation. Use of voice is dynamic and enhances meaning of presentation.		Some eye contact, reading for too much of presentation. Voice is too low or unclear. Tone is not interesting.		Reading for majority of presentation with little to no eye contact. Unclear voice, incorrect pronunciation. Tone is monotonous or uninteresting.

Submission:

One team member (group submission) should upload the following to LearnJCU under Assessment. Submit four separate files (do not zip them up):

- A template submission file, **a2.html,** is provided for you. Complete this with the requested information including login details and links to your sites.
- A zip file of your **theme**, as could be imported to be used as a new theme in another WordPress site.
- A WordPress **export** of your site. (You may need to zip up the exported xml file for LearnJCU.)
- **Presentation** video

Each *individual* must also **submit their LinkedIn profile URL** separately on LearnJCU (as this mark is individual, not per group) as text, not in a separate document. Note, this is just a link to your profile, not to the project details.
Please also copy-and-paste the content of your project report into the submission text box.

Due:

Submit your project by the date and time specified on LearnJCU. Submissions received after this date will incur late penalties as described in the subject outline.