Test Case Id: 5	**Test Purpose:** Verify requirement – Lecturer View Statistics

Environment: Python Flask running on local host, accessed via Microsoft Edge.

Python Version 3.10.4

Flask Version 2.2.3

Preconditions: Two assessments exist in the system one formative and one summative. Each has two questions, one True/False and one Multiple Choice. Two students exist in the system, who have taken the summative test exactly once, and the formative test exactly twice. One student is good and has answered all questions correctly, the other is bad and has answered all incorrectly. These students belong to different cohorts. Their respective student numbers and cohorts are known. All assessment details are known, including questions, answers, and assessment type.

User is logged into a lecturer account, and has landed on the lecturer homepage.

Test Case Steps: Basic Flow

Step No	Procedure	Expected Response	Pass/Fail
1	Click on the 'Teaching Staff Review Statistics' button. (Figure 1, red)	The user is directed to the 'Teaching-Staff Review Statistics' page. (Figure 2)	Pass
2	Click on the 'View Student Statistics' button. (Figure 2, blue)	The user is directed to the 'Individual Statistics' page. (Figure 3)	Pass
3	View the table data, checking it is consistent and correct. (Figure 3, blue)	6 rows are displayed, one for each time a student completed an assessment.	Pass
4		The percentage field is displayed as 100 or 0 depending on the good/bad student.	Pass
5		UserNo is consistent with the good/bad student.	Pass
6		The attempt field is 1 for summative assessments, and 1 for the first formative attempt, and 2 for the second.	Pass
7		The assessment field displays the correct name.	Pass
8	Enter one of the student numbers into the search bar. (Figure 3, red)	Only rows with the searched for student are shown (3 rows)	Pass

9	Click on the statistics homepage button. (Figure 3, black)	The user is directed to the 'Teaching-Staff Review Statistics' page. (Figure 2)	Pass
10	Click on the view cohort statistics button. (Figure 2, red)	The user is directed to the Cohort Statistics select screen. (Figure 4)	Pass
11		There are two buttons displaying the two available cohorts. (Figure 4, red)	Pass
12	Click on a cohort button. (Figure 4, red)	The user is directed to the Cohort Statistics page for the relevant cohort. (Figure 5)	Pass
13	View the table data, checking it is consistent and correct. (Figure 5, red)	The same rows from step 3 are viewable, but only for the student from the relevant cohort. There should be 3 total rows in the table.	Pass
14			
15			
16			
17			
18			
19			
20			
Comments:			
Related Tests: 1, 2, 3, 4, Create and student take assessment.			
Author: c22076087		**Checker:** c22076087	

Figure 1:

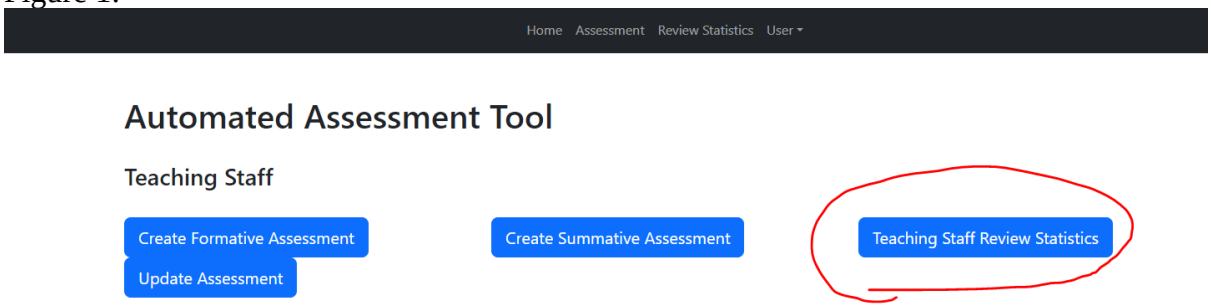


Figure 2:

Figure 3:

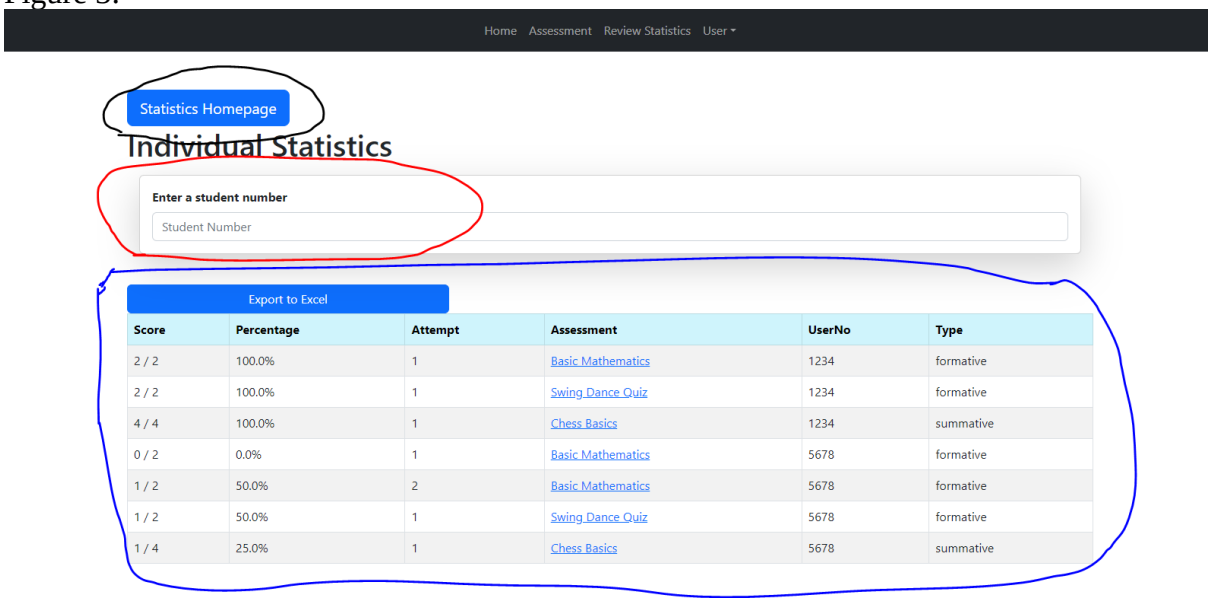


Figure 4:

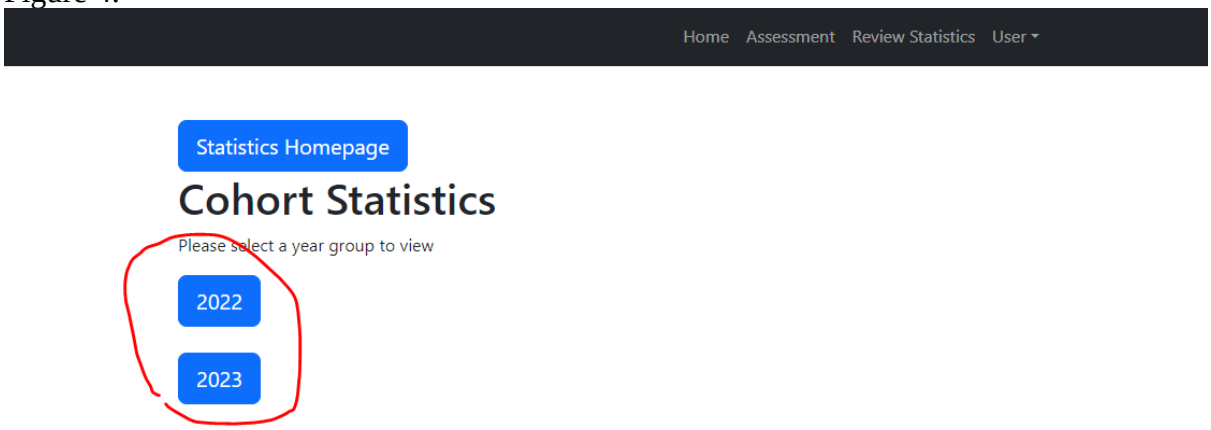
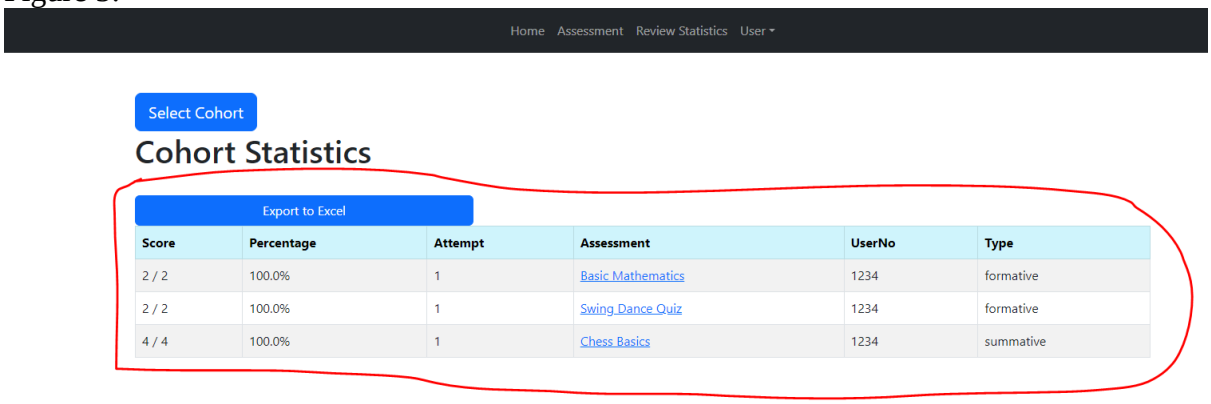


Figure 5:



Developing the Prototype

Project Management

When starting the project, we decided to follow a waterfall development methodology due to the well-defined and certain nature of the requirements. We knew that they had been achieved before by previous student cohorts, and we were unlikely to run into issues which would require any drastic change of direction.

We used a kanban board to plan out our goals, however this was greatly underutilised. Although all our goals were on this board, a lack of engagement meant that these got overlooked. If more effort was made to ensure the team understood the value of the tool, then this could solve some of the engagement problems with the project. However the team used instant messaging to great effect.

We quickly developed an initial plan for our prototype, with a database schema, wireframes, and a codebase. However we underestimated our planning ability at this stage, and once we were developing features, we often realised our initial assumptions had been incorrect. This led to us having to change directions multiple times, where a scrum based approach would have been more effective.

We created some wireframes to show how our prototype would work. These were effective as talking points, created discussion as to how functionality should be implemented. However they were of limited use when developing our look and feel. We should have had each member develop their own features wireframes to allow them greater control over their contribution.

Development Methodology

In our first meeting we decided to use python flask to develop our application as we all had relevant experience using this to develop our CMT120 personal digital portfolio. This meant we were able to write code quicker, and more effectively. We also started our codebase with a reworked version of my CMT120 coursework, allowing us to bypass setting up our project structure by adapting to the one already established.

We chose to use local SQLite databases for our prototype. If we were to take the project further we would look at creating a shared SQL environment to work with. Our team members taking database modules as part of the course used their skills to set up and manage the database schema, allowing us to greater specialise within the project.

Our styling was managed by the bootstrap CSS framework, as several members had relevant experience. This allowed us to focus more on the functional aspects, while maintaining a consistent and pleasing style.

We made use of continuous integration through GitLab to merge our individual contributions. As the most experienced in git, I took responsibility for merging branches. However in future we could merge branches and pull from main much more frequently. Additionally we should name branches after features, rather than team members. Furthermore we could make use of tags to version our main branch.

In hindsight, we did not create enough quality criteria. Having a testing or code standards would have allowed us to guarantee the quality of our final product, whereas there may be unknown bugs in our final version.

Team Dynamics

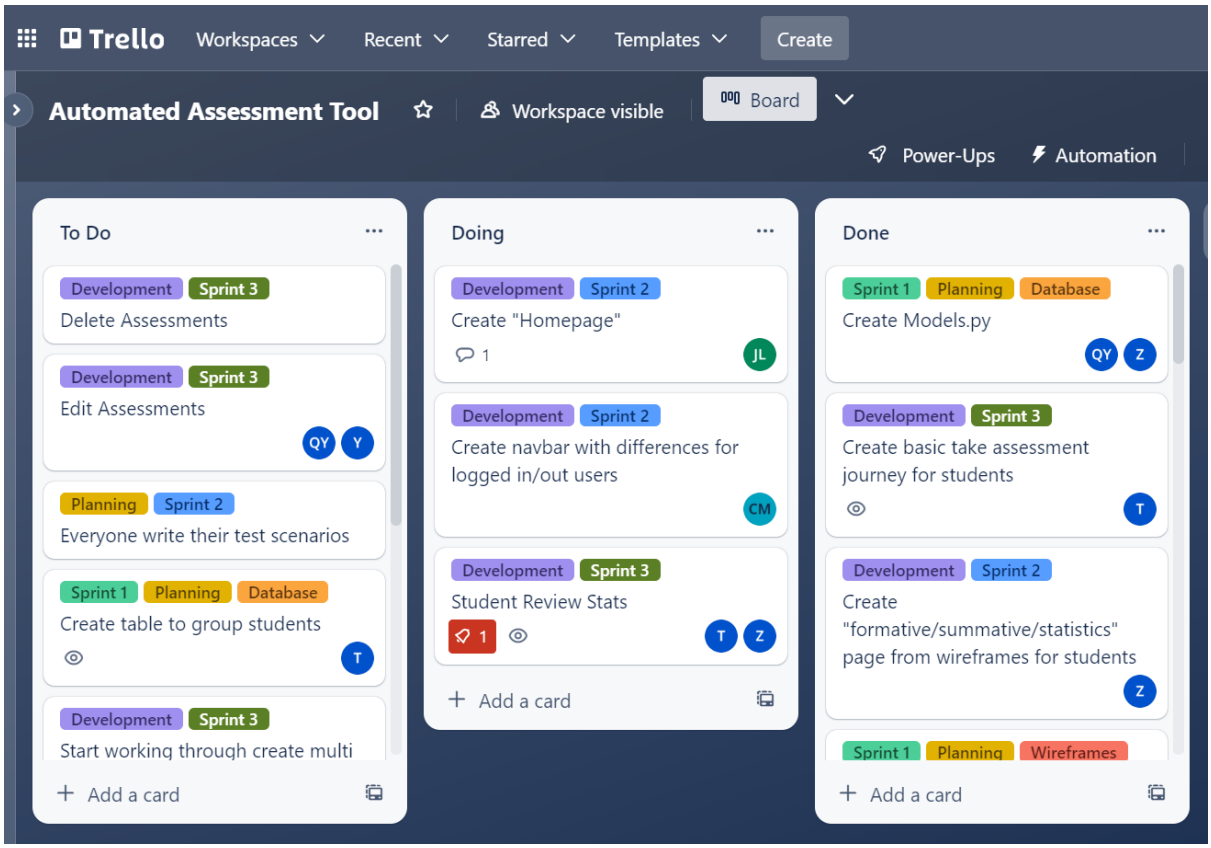
Our adoption of the agile manifesto led to us being able to communicate openly, without criticism. Any issues we encountered were resolved quickly via group discussion. Everyone had an equal voice and decisions were made as a team. Disagreements were respectful and compromises were reached, however decision making took more effort, and having designated stakeholders would be worth considering in future.

We initially aligned each member to their own product feature and a major workstream (database, wireframes, and codebase). This was unsuccessful as we did not communicate

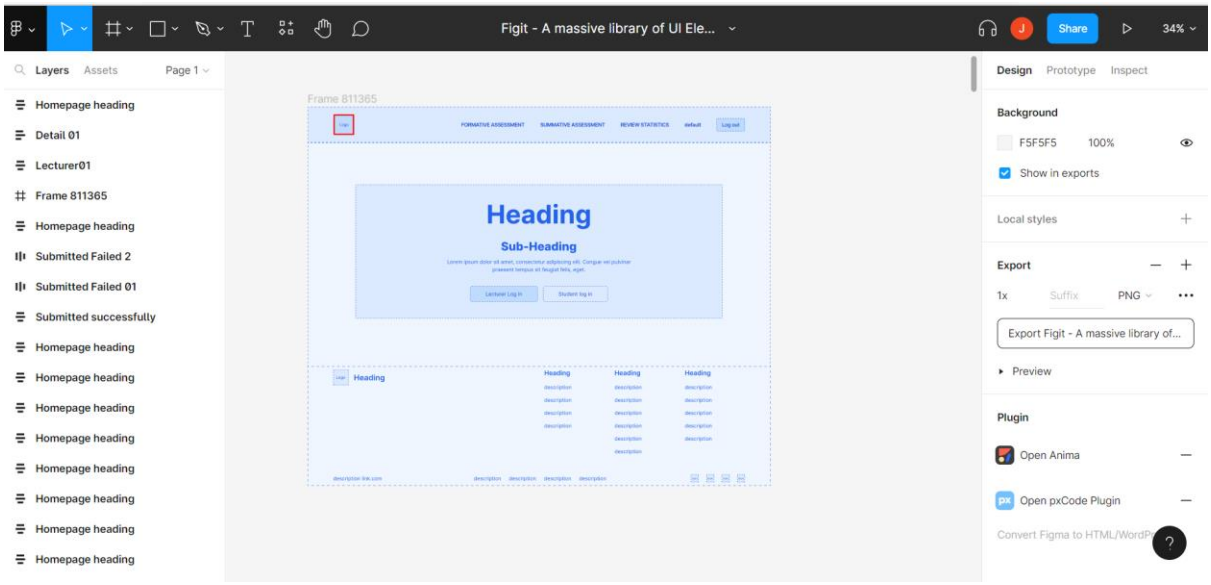
with each other effectively about what work needed doing, and some members were uncertain about their responsibilities. This led to some resentment from members who had put more work into the project, and a disproportionate amount of work done by individuals. As a result of competing deadlines, work and family commitments, each team members individual commitment to the project waxed and waned. At the start and end of the project was when we worked best as a team, however the middle was lacklustre. In general there was a pessimistic feeling from some, as good scores were needed on this assessment in order to pass the module.

Team Artefacts

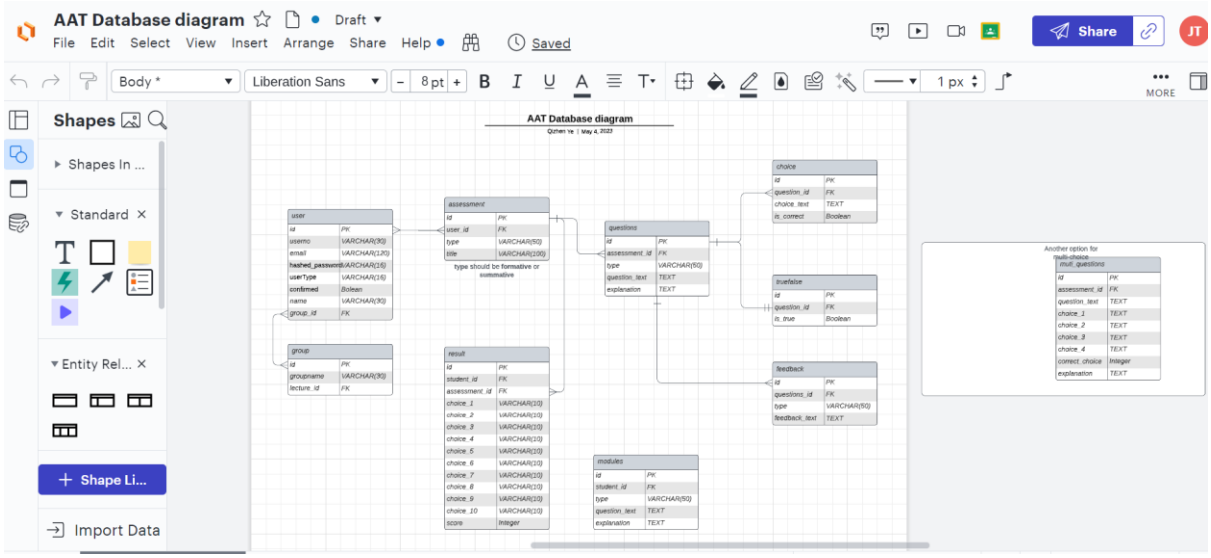
Kanban Board:



Wireframes:



Database Schema:



CMT313 Software Engineering - Self & Peer Review Contribution Forms

Student ID: c22076087 Team Number: 15

Self Review Contribution Form

Assessment of: _____**YOURSELF**_____

For each category, provide some comments, and award yourself and each member of your team a rating using the scale, 😊, 😐, ☹. Remember to refer to your team agreement.

Category	Comments, Explanations etc.	Rating 😊 😐 ☹
Group Participation and Citizenship • Attended meetings regularly and on time, • Positive attitude, encouraged and motivated team members, • Engages and provides effective contribution in discussions at meetings or online. • Supported team decisions, helped to reach team consensus, helped resolve conflicts in the team.	I regularly participated in group discussions, where I generally was the organiser of unscheduled meetings. However I was late on occasion to these meetings. I tried to utilise my experience as a scrum master to facilitate discussions, and direct team members towards what I envisioned to be the most critical parts of the project. Using my previous experience I managed the teams Trello board and tried to give helpful direction to fellow teammates to facilitate project progress.	😊
Time Management and Responsibility • Accepted fair share of work • Reliably completed work by required time. • Participates in Team Project Management, formally or informally ensuring the work stays on track, with everyone informed of progress.	I accepted a fair share of the work for this assessment, reaching out into areas other than my feature, including a student taking assessment journey, and the initial set up of the flask project files. I also took on the brunt of the organising responsibilities, ensuring that everyone was staying on track as much as possible.	😊
Scholarly / Professional • Displayed or tried to develop a wide range of skills in the service of the project, • Provided technical insights and solutions to problems. • Willing to provide/accepts constructive criticism, willing to adapt / consider other people's perspective	I attempted to develop my skills as a programmer during this project, especially using javascript to handle data display and html tables. I also attempted to develop my skills using git and continuous integration, handling most if not all merge requests from my team. Although I had many ideas for how to conduct the project, I always tried to get feedback from the team for any group decisions. However I was occasionally stubborn when challenged. For example when considering how to create assessments I was reluctant to change our approach, and wrote a solution that ended up not being used after we indeed took a different approach.	😊

Peer Review Contribution Form – Fellow Team Member 1

ID of student you are reviewing: **Team member 1 student ID:** 2097184

For each category, provide some comments, and award yourself and each member of your team a rating using the scale, 😊, 😐, ☹. Remember to refer to your team agreement.

Category	Comments, Explanations etc.	Rating 😊 😐 ☹
Group Participation and Citizenship • Attended meetings regularly and on time, • Positive attitude, encouraged and motivated team members, • Engages and provides effective contribution in discussions at meetings or online. • Supported team decisions, helped to reach team consensus, helped resolve conflicts in the team.	Occasionally missed meetings without explanation. However was a very active team participant, discussing ideas outside of team meetings individually and as a group. Supported other team members often, including with wireframes, and other members product features. Including creating and modifying assessments and both question types.	😊
Time Management and Responsibility • Accepted fair share of work • Reliably completed work by required time. • Participates in Team Project Management, formally or informally ensuring the work stays on track, with everyone informed of progress.	Accepted a fair share of work, as mentioned on assessment and question creation, as well as the data structure for the project. Always completed work on time, and mentioned to the team when changes had been made and needed merging into git.	😊
Scholarly / Professional • Displayed or tried to develop a wide range of skills in the service of the project, • Provided technical insights and solutions to problems. • Willing to provide/accepts constructive criticism, willing to adapt / consider other people's perspective	Developed a good understanding of JQuery when dynamically building a webpage for creating assessments, not covered in the course. They were the owner of this technical aspect, which was crucial to our project. Helped resolve a conflict between the wireframing and database design early on between team members.	😊

Peer Review Contribution Form – Fellow Team Member 2

ID of student you are reviewing: Team member 2 student ID: 22095744

For each category, provide some comments, and award yourself and each member of your team a rating using the scale, 😊, 😐, ☹. Remember to refer to your team agreement.

Category	Comments, Explanations etc.	Rating 😊 😐 ☹
Group Participation and Citizenship • Attended meetings regularly and on time, • Positive attitude, encouraged and motivated team members, • Engages and provides effective contribution in discussions at meetings or online. • Supported team decisions, helped to reach team consensus, helped resolve conflicts in the team.	Always attended meetings, although was occasionally late we always received advance notice. Very effectively communicated the database design across the different aspects of the project to the team, and redesigned the schema when needed. Provided interesting discussion points related the database during the project, encouraging us to consider how the final version would work.	😊
Time Management and Responsibility • Accepted fair share of work • Reliably completed work by required time. • Participates in Team Project Management, formally or informally ensuring the work stays on track, with everyone informed of progress.	Accepted a fair share of work with designing the database and creating the schema diagram, always finishing work on time. Regularly participated in meetings, communicating with team on their product features and how this would impact the database schema.	😊
Scholarly / Professional • Displayed or tried to develop a wide range of skills in the service of the project, • Provided technical insights and solutions to problems. • Willing to provide/accepts constructive criticism, willing to adapt / consider other people's perspective	Displayed a keenness to apply skills learned in the optional database part of the course to the project, with an eye towards adapting this into the flask framework in an advanced way. However was slightly reluctant to involve themself hands on in the other parts of the project. Displayed a very adaptable aptitude for managing the database schema with a willingness to discuss and adapt to other ideas as the project progressed.	😊

Peer Review Contribution Form – Fellow Team Member 3

ID of student you are reviewing: Team member 3 student ID: 2107271

For each category, provide some comments, and award yourself and each member of your team a rating using the scale, 😊, 😐, ☹. Remember to refer to your team agreement.

Category	Comments, Explanations etc.	Rating 😊 😐 ☹
Group Participation and Citizenship • Attended meetings regularly and on time, • Positive attitude, encouraged and motivated team members, • Engages and provides effective contribution in discussions at meetings or online. • Supported team decisions, helped to reach team consensus, helped resolve conflicts in the team.	Participation was varied, would often turn up extremely late to meetings, although we would usually be notified. Was also unavailable for several important meetings, and made little attempt to catchup from these. However did join meetings while on holiday unprompted, and had a generally positive attitude throughout. Unfortunately this did not translate to involving in conversations, and I cannot recall an instance of serious contribution to discussion.	😐
Time Management and Responsibility • Accepted fair share of work • Reliably completed work by required time. • Participates in Team Project Management, formally or informally ensuring the work stays on track, with everyone informed of progress.	This member had to be directed in any group work that was done in the project. There was no pragmatism with the project, and no work which was reliably completed. Some work was done for a site homepage, but this was completed so late another group member had picked it up, and was not useful in any case.	☹
Scholarly / Professional • Displayed or tried to develop a wide range of skills in the service of the project, • Provided technical insights and solutions to problems. • Willing to provide/accepts constructive criticism, willing to adapt / consider other people's perspective	This member did not to my knowledge try and develop any skills in this project, nor provided any technical insight into the project. There was no contribution serious enough to provide or accept constructive criticism, or adapt to other perspectives.	☹

Peer Review Contribution Form – Fellow Team Member 4

ID of student you are reviewing: Team member 4 student ID: 22075154

For each category, provide some comments, and award yourself and each member of your team a rating using the scale, 😊, 😐, ☹. Remember to refer to your team agreement.

Category	Comments, Explanations etc.	Rating 😊 😐 ☹
Group Participation and Citizenship • Attended meetings regularly and on time, • Positive attitude, encouraged and motivated team members, • Engages and provides effective contribution in discussions at meetings or online. • Supported team decisions, helped to reach team consensus, helped resolve conflicts in the team.	Regular attended meetings, and was always very punctual. Generally had a positive attitude, and when engaged in conversation had interesting insights and thoughts. However this member needed prompting into sharing, and otherwise would not have been involved. The insights shared were extremely valuable to the group discussion and path of the project, including around the wireframes and site styling, which proved vital.	😊
Time Management and Responsibility • Accepted fair share of work • Reliably completed work by required time. • Participates in Team Project Management, formally or informally ensuring the work stays on track, with everyone informed of progress.	Accepted a more than fair share of responsibility towards the project, with an excellent amount of work done on an initial draft of the site wireframes. However relied heavily on the work done by another team member for their product feature, and could have taken more ownership of this feature development rather than reimplementing the formative assessments for the summative assessment feature.	😊
Scholarly / Professional • Displayed or tried to develop a wide range of skills in the service of the project, • Provided technical insights and solutions to problems. • Willing to provide/accepts constructive criticism, willing to adapt / consider other people's perspective	Displayed a good attitude with learning to use new tools for creating wireframes and diagrams, and was studious in investigating different ways to import styles for our site before we settled on a decision. While deciding on the styling was very mature and considerate of everyone's skills, experience and preference in facilitating a decision.	😊

Peer Review Contribution Form – Fellow Team Member 5

ID of student you are reviewing: Team member 5 student ID: 22110573

For each category, provide some comments, and award yourself and each member of your team a rating using the scale, 😊, 😐, ☹. Remember to refer to your team agreement.

Category	Comments, Explanations etc.	Rating 😊 😐 ☹
Group Participation and Citizenship • Attended meetings regularly and on time, • Positive attitude, encouraged and motivated team members, • Engages and provides effective contribution in discussions at meetings or online. • Supported team decisions, helped to reach team consensus, helped resolve conflicts in the team.	Always attended group meetings, and was often very punctual. Always had a very positive and inspiring attitude towards the project, which I found very motivating. However could have been a more active participant in decision making, participating in some but not all of the critical decisions. Generally there was no conflict around this team member however, and no conflicts to resolve.	😊
Time Management and Responsibility • Accepted fair share of work • Reliably completed work by required time. • Participates in Team Project Management, formally or informally ensuring the work stays on track, with everyone informed of progress.	Whenever asked to progress a task this member always did so promptly and at their earliest convenience, while the quality of work was generally very high. However could have been more involved with the project direction, and the initial version of their product feature was done mostly by another team member. It would have been more useful to have them involved directly.	😊
Scholarly / Professional • Displayed or tried to develop a wide range of skills in the service of the project, • Provided technical insights and solutions to problems. • Willing to provide/accepts constructive criticism, willing to adapt / consider other people's perspective	This team member expressed a preference to try and develop their skills as a programmer, and tried to choose tasks that would be more suited to this skill path. Whenever tasks were completed in a way that was not how the team envisioned, we had a mature discussion over the best way to proceed. One example was the structure of the routes.py file, which prompted us into a mature discussion of how to best change the file structure of the overall project to suit everyone's expectations.	😊