

# Team VEGA: Auber

Method Selection and Planning



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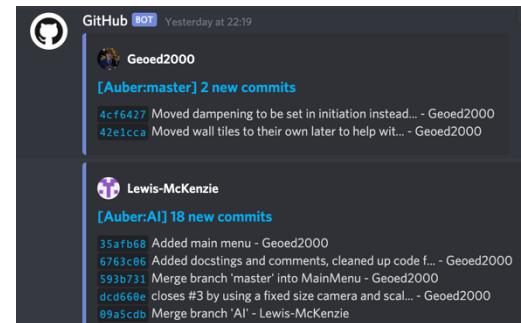
We used the Scrum method for software development as it allowed a more dynamic approach to tasks. Scrum is a method focused on planning and identifying requirements in the initial stage, then moving to a short sprint of development (2-4 weeks) wherein the development team meet daily to ensure the project is on task and to check there is no overlap in work. It allowed for greater transparency for every team member to access project information and it allowed for regular inspection of progress so adjustment can be made where necessary as issues arise. As we have a very short time frame in which to complete the project, we chose an agile method to be able to plan and organise our team's time effectively.

We used the following collaborative tools:

- Discord was used for communication and conducting team meetings. We have a team server with separate channels for general conversations, useful links/information and implemented a bot to notify of new git commits. This tool enabled cohesiveness among team-members and provided regular updates on progress.
- Google Doc was used for documentation, as it allows for synchronous collaboration from the whole team remotely with access to edit and comment history. The data is stored externally on a cloud server, so it is more protected against data loss and is saved every few seconds.
- Trello is a Kanban board we used to track ongoing tasks, their progress and completed work. Each pair of programmers was assigned a colour to easily identify their set tasks and are able to move their tasks to the various columns and add a checklist of items to be completed to finish their task, breaking it down further (see screenshots below). Any unassigned tasks are left white for a team to pick up as their own when they finish tasks. This went well with our Scrum approach to development as it meant we could easily identify what was needed to be done and any changes to our plan could be effectively communicated. We had a weekly board for all ongoing tasks (not pictured) and a board specifically for implementation tasks.

- Github was used as a remote repository for the project and storing code. We also had a bot on our team discord server to send a message when new commits, branches and merges occurred so the whole team could see what work was ongoing. This stream of information supplemented our daily scrum meeting.
- Git was used as a version control system to track all commits from all team members.

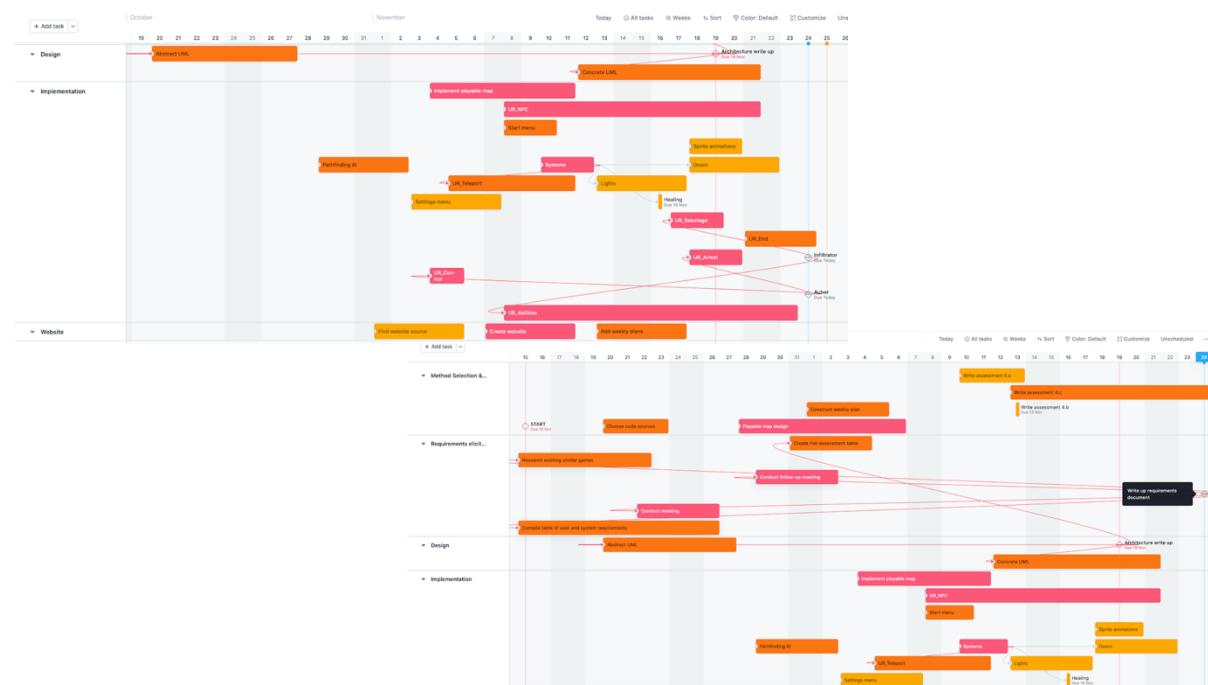
The alternative collaborative tools we considered were Monday and Asana. We did not choose to use Monday as we found the website to be incompatible with members of the team using Mac OS and the members of the team who could use it found the tool to be hard to understand and use. We did not choose Asana because the features we liked in Trello were available there but behind a paywall and, again, the tool was unwieldy.



Our approach to team organisation was to track all ongoing tasks on the Trello board supplemented by the checklist system. We kept all non-development work, such as contributions to our list of references, documentation, basic sketches of the game map and other things organised within folders on our team google drive. This made any resources needed for implementation easy to access and find for the whole team. The scrum master, Chloe, went through all of the tasks on a weekly basis to make sure they were well organised and to see if anything needed to be modified. This meant that the team was always on top of things and well organised. For the team, this meant that we were able to work more effectively as everything we needed was readily available in a clear format.

When identifying the key tasks, we used a table format alongside a traffic light system of colour coding for priority, which we transferred over to our Trello board for the weekly plan. Red is high priority; orange is medium, and green is low. Previous weeks' tasks moved up a priority level if they went uncompleted the week before. Moreover, a Gantt chart was used to graphically represent tasks, their dependencies, their expected timeframes and the group member assigned to each task.

As the project evolved, we added more tasks as we worked due to thinking of new ideas and features that needed to be added. We started off heavy with planning and documenting, and then had a month-long sprint of implementation. During this stage, people from separate parts of the product would meet bi-weekly to discuss progress and offer outsider insight onto those particular pieces of work, which proved invaluable as it meant we could plan to develop additional features which were not thought of in the first stage of requirements creation.



Task	Dependant(s)	Start date	Finish date	Priority
Requirements elicitation	Ben	22/10	4/11	High
Abstract UML	Lewis, Matthew	15/10	27/10	Medium
Risk assessment	Matthew	15/10	4/11	High
Method selection and planning write-up	Chloe, Ben	17/11	24/11	High
Architecture write up	Chloe, Lewis	17/11	24/11	High
Team/customer meeting (prep, meeting, write up)	Chloe, Ben	26/10, 02/11	27/10, 03/11	Medium
Code planning	Chloe, Haopeng	02/11	Ongoing	Medium
Playable map design	Chloe	23/10	03/11	High
Playable map implementation	Haopeng, George	04/11	10/11	High
Character Control: FR_MOVEMENT	Haopeng	04/11	05/11	High
Start menu: FR_MENU_SELECT	Chloe, George	13/11	20/11	Medium
Sabotaged systems: FR_SABOTAGED	Haopeng	16/11	17/11	Low
Pause: FR_PAUSE	Lewis	19/11	21/11	Low
Fast-Travel mechanism: FR_TELEPORT	Haopeng	05/11	8/11	High
Infiltrator AI: FR_NPC_AI	Haopeng, Lewis	15/11	20/11	High
Infiltrator Abilities: FR_ABILITIES	Haopeng	08/11	23/11	High
Sabotage mechanic: UR_SYSTEMS	Haopeng	17/11	19/11	High
Non-Playable Characters: UR_NPC	Haopeng, Lewis	18/11	21/11	High
Settings menu: FR_SETTINGS	Lewis	14/11	21/11	Low
Systems: UR_SYSTEMS	Haopeng	12/11	16/11	High
Lights: FR_ABILITIES	Matthew	15/11	19/11	Low
Healing mechanics: FR_HEALING	Haopeng	16/11	16/11	Low
Doors	Lewis	18/11	21/11	Low
Sprite animations	George	18/11	20/11	Medium
Mini map: FR_HUD	Matthew	17/11		Medium
Demo mode: FR_DEMO	George	20/11	24/11	Medium
Arrest mechanism: FR_ARRESTMECH	Haopeng	18/11	20/11	High