Scrum Methodology Proof

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Product Backlog

Main priority was given to user stories related to board configuration, local multiplayer and recording games. Priority for each category and user stories within each category is given below.

1. Board Configuration:

1. Random Board Setup
2. Custom Board Setup

2. Local Multiplayer:

1. Set up local game
2. Individual Clue Access
3. Take Turn In Game
4. Take Question Action
5. Take Search Action

3. Recording Games:

1. Record Games Locally
2. Review Games
3. Set Up Database
4. Save Random Games
5. Save Custom Games
6. Filter Saved Games

4. Interactive Board

1. Visualise Board
2. Hex Tooltips
3. Check For Valid Moves
4. Clue Tick List

5. Login

1. Setup Google Auth
2. Connect To Azure Page

Issues were resolved as they came up during development testing.

Sprints

Sprint 1 – 2024-04-17 to 2024-04-21

Sprint Backlog

For this sprint, the following user stories were selected:

User Story	Points	Description
Custom Board Setup	5	As a Player, I want to set up a custom board setup, either from the cards provided in the physical board game or a previous game setup.
Random Game Setup	8	As a Player, I want to set up a random board setup from playcryptid.com The official site for the Cryptid board game allows players to generate a random game setup, including clues for a given number of players. This information is stored in a JSON object obtained from a different server and processed by playcryptid.com. Our site should be able to capture this JSON object and configure the board as specified by it.
Set Up Local Game from Random Setup	6	As a Player, I want to set up a local multiplayer game between three and five players using a random setup.
Individual Clue Access	4	As a Player, I want my clue to only be accessible to me during the game.
Take Turn In Game	7	As a Player, I want to take a turn by selecting a hex and prompting another player to play based on their clue, in order to play the game.

Custom Game Setup

Task	Description
Create Board	Create some object to store the attributes and states of each hex on the board, such as terrain type, habitat type, building type. This also includes the layout of the board tiles at a higher level.
Change Tile Order	Change which position in the grid is occupied by which tile. Since this is based on a board game, there are six different tiles that are used to build the board.
Change Tile Orientation	Change the orientation of each tile position. Each tile is roughly rectangular, so each tile can either be right side up or upside down on the board.
Place Buildings	Place buildings on hexes. Each hex can contain any building, but only one building can be on a hex at a time, and only one copy of each building can be on the board at a time.
Parse Map Key	Using a map key in the same format as those from playcryptid.com, set up the board to match that key.

Random Game Setup

Task	Description
Fetch Random Map Key	Fetch a random key from playcryptid.com. The key is contained inside a JSON object which stores a board setup and every possible game that can be played on it.
Board Setup From Random Key	Using the key from the JSON object, set up the board object for a game.

Set Up Local Game from Random Setup

Task	Description
Select Number of Players	Select the number of players to set up a game for. Games with different player counts have very different clues, since one should be able to deduce where the cryptid is only

	based on the clues given to the players.
Mark Cryptid Space	Save the cryptid's location for determining the winner of the game and later review.
Place Player Pieces	Allow Players to place cubes and disks on every hex.
Start Game	Start the game by prompting each player to pick two hexes where the cryptid cannot be according to their clue.

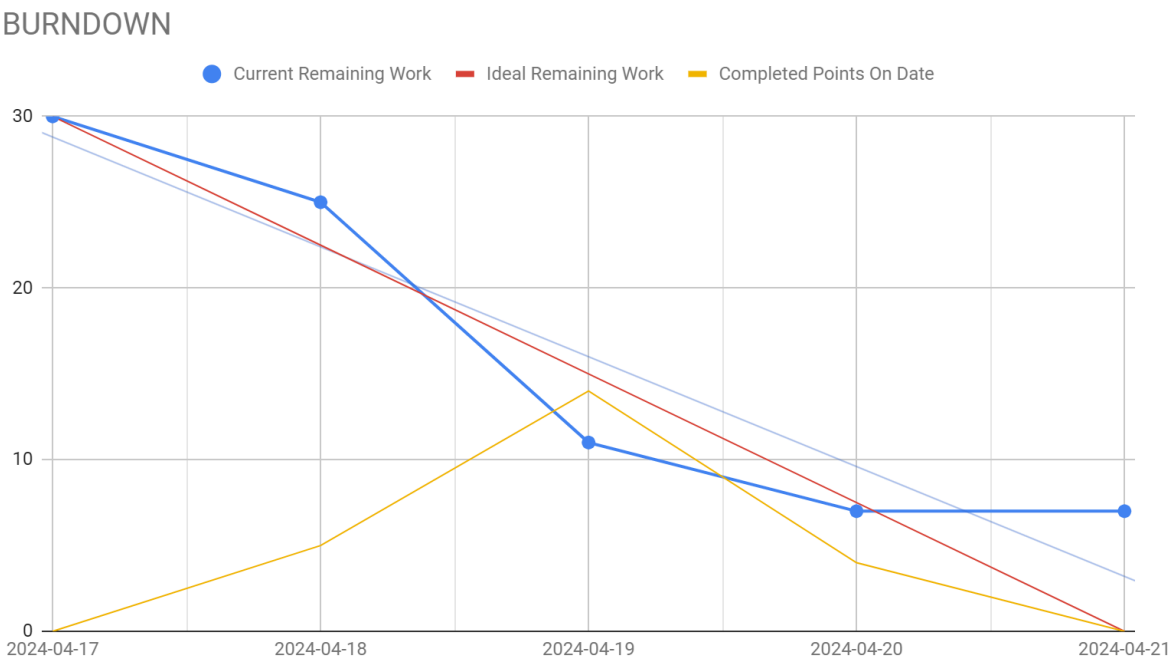
Individual Clue Access

Task	Description
Show Clue	Allow current player to access their clue during their turn
Hide Clue	When not their turn, hide that player's clue so that other players cannot access it

Take Turn In Game

Task	Description
Start Game	Prompt the Player whose turn is about to begin to take the device or assume control.
Select Hex	Player should pick a hex to take an action on.
Player Response	Once an action is taken, prompt other players to respond, either placing a cube if the space is invalid according to their clue, or a disk if it is valid.
Ensure Element Access	Ensure Players can only access elements that they are allowed to during their turn.
End Turn	Allow active Player to review the board state before passing to the next Player.
Add Cube Penalty	If the Active Player causes another Player to place a cube, they have to place a cube as well.

Sprint Burndown



Stand-Up Summaries

2024-04-19

- Github page shows the board setup page, with interaction up to setting up a local game with a random board.
- Online voice meeting was held.
- User Stories and UAT's have to be formally written up.
- Login is causing problems - leave for now.
- Need to deploy to Azure.

11 April 2024 – 22 April 2024	SPRINT 1
11 April 2024 Thursday	We received our first communication from Naomi (tutor, student number 2456718), who informed us about our client, Andrew (student number 2090244).
12 April 2024 Friday	We discussed our weekend timetables to coordinate availability with Andrew for a meeting. Additionally, an email was sent to Andrew to inquire about scheduling a meeting with him.
13 April 2024 Saturday	We created a Discord server and sent the link to both Andrew and Naomi: Link: https://discord.gg/sbz73aCW

14 April 2024 Sunday	
15 April 2024 Monday	We received Andrew's available times for the meeting.
16 April 2024 Tuesday	We scheduled a meeting with Andrew and Naomi from 15:00 to 16:00.
17 April 2024 Wednesday	During a meeting held via MS Teams, Andrew and Naomi joined our Discord server. We assigned roles and reviewed the timetable of group members to ensure appropriate workload distribution for the sprint. We discussed our approach to user authentication and collectively decided to use OpenID.
18 April 2024 Thursday	During a progress check, it was discovered that 2544808 and 2539199 were held back on their tasks due to preparation for their upcoming math test. Consequently, 2539199 took charge of developing the login page, while both 2539199 and 2550752 collaborated on authentication, opting to switch to Google authentication for user authentication purposes. Furthermore, the decision was made to use MongoDB as our database. Despite facing some challenges, the other team members remained on track with their tasks.
19 April 2024 Friday	Some tasks were successfully completed, with the majority of completed tasks being handled by 2312053. Additionally, 2539199 managed to complete the login page. Meanwhile, 2544808 and 2539199 began working on their respective tasks. However, some group members faced challenges in understanding their tasks, which affected their productivity in completing them. The team held its second meeting to address these issues and ensure better clarity and understanding moving forward.

20 April 2024 Saturday	Members who struggled to understand their tasks had their workload reduced to allow them to focus on fewer tasks. Their remaining tasks were redistributed among the group to ensure they could be completed effectively. As for 2544808's difficulty in submitting to GitHub pages, he shared his progress with some group members, who then took responsibility for submitting it on his behalf.
21 April 2024 Sunday	Every other group member took on some tasks originally assigned to 2544808, who cited family issues. Despite this redistribution, members continued to work on their own tasks. 2312053 not only completed her own tasks but also took over the remaining task of 2544808. Additionally, she assisted other group members in achieving their goals. To track task completion and accommodate 2544808's inability to submit code to the project's GitHub account, a Taiga channel was created at taiga.io. The link (https://tree.taiga.io/invitation/c08424af-ffe5-11ee-91f5-f9ab05f2aa3c) was shared for transparency. Due to ongoing load shedding in and around Johannesburg, members without access to generators or alternative power sources faced difficulties in completing their tasks. By the end of the day, approximately 70% of all tasks for the sprint were completed. Finally, the web app was deployed via Azure.
22 April 2024 Monday	Before meeting with Naomi, we had a discussion about our shortcomings. 2544808 apologized and assured the group that he would strive to perform better in the next sprint to avoid causing further delays. Similarly, 2539199 and 2596469 apologized for not completing all their tasks due to load shedding and pledged to prioritize completing their tasks ahead of time in the future. 2550752 apologized for not getting the database working and expressed surprise at the complexity of the database. Additionally, the UML diagrams were completed according to each person's assigned task.

Sprint Review – 2024-04-22

From the user stories selected, the following were completed:

- Custom Board Setup
    - User is able to change all aspects of the board
- Random Game Setup

    - App fetches random board setup and changes the displayed board using the fetched map code
- Set Up Local Game from Random Setup
    - User is able to pick a player count and a game is loaded from the JSON fetched from playcryptid.com
    - User can either start the game and play online, or use the app as a setup for the physical board game.
- Individual Clue Access
    - Players are only able to access their own clue during their turn, not other players'.

The following user stories were not completed:

- Take Turn In Game
    - Interactions are far more involved than initially estimated.
    - Now broken into three stories: this one plus the two types of actions that can be taken.
    - Question Action implemented up to prompting selected player for response.

Other tasks finished:

- Set up Taiga to track user stories, tasks and issues.
- Look into third-party authenticators for login purposes.
- Set up Github deployment to Azure Site and test Github site.

Sprint Retrospective – 2024-04-22

- The Good
    - Board implementation is going faster than expected.
- The Bad
    - Azure integration is more difficult than expected.
        - Most board implementation is done via Github page.
    - Login integration is taking too long and not vital to functionality of the app
        - Leave until everything functional is finished.
- The Future
    - Less time for some team members next week to work on the project due to other academic obligations.
        - Delegate tasks better.

Sprint 2 – 2024-04-22 to 2024-04-29

Sprint Backlog

For this sprint, the following user stories were selected:

User Story	Points	Description
Take Turn In Game	7	As a Player, I want to take a turn by selecting a hex and prompting another player to play based on their clue, in order to play the game.
Take Question Action	4	As a Player, I want to take a Question Action. A Question Action involves selecting a hex and picking a player. That player then states whether that hex is a valid position for the cryptid based on their clue, placing the appropriate token on the hex.
Take Search Action	4	As a Player, I want to take a Search Action. A Search Action involves selecting a hex that is valid according to your clue and placing a disk on it. Every other player then places a token on the same hex until either a cube is placed, indicating that the search was unsuccessful, or every player placed a disk, which means the active player found the cryptid.
Record Games	10	As a Player, I want to record the games I play for later analysis.

Take Turn In Game

Task	Description
Start Game	Prompt the Player whose turn is about to begin to take the device or assume control.
Select Hex	Player should pick a hex to take an action on.
Player Response	Once an action is taken, prompt other players to respond, either placing a cube if the space is invalid according to their clue, or a disk if it is valid.
Ensure Element Access	Ensure Players can only access elements that they are allowed to during their turn.
End Turn	Allow active Player to review the board state before passing to the next Player.
Add Cube Penalty	If the Active Player causes another Player to place a cube, they have to place a cube as well.

Take Question Action

Task	Description
Prompt Player	Prompt selected player to respond to question action
Update board with new info	Add relevant tokens to the board based on the player's response, along with a penalty cube from the active player if needed.

Take Search Action

Task	Description
Prompt Player	Prompt the next player in turn order to state whether the selected hex is valid according to their clue.
Add Disk to Selected Hex	Add a disk of the prompted player to the hex if they responded that the hex is valid according to their clue and pass to the next player.
Update board after cube is placed	Once a cube is placed, ensure all previous tokens are still visible and prompt the active player to add a penalty cube.
Win Condition	Check if all players placed a disk on the hex. If yes, the active player has won the game.

Record Games

Task	Description
Record Game Metadata Local	At the start of a game, save the map code, gamemode, number of players and cryptid location locally.
Record Game Setup Local	After the setup phase, save the locations of the starting cubes locally.
Record Question Action Local	Once a question action is taken, save the active player, selected hex, prompted player, and relevant token additions locally.

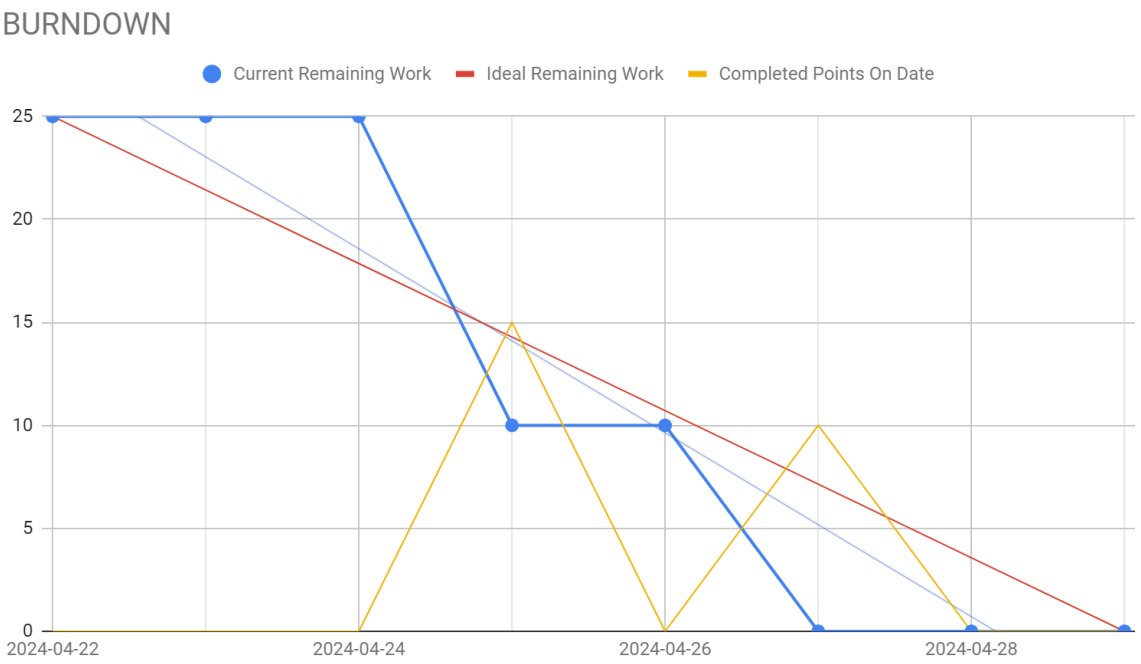
Record Search Action Local	Once a search action is taken, save the active player, selected hex and relevant token additions locally.
Record Endgame Local	Once a player has won, save the winning player number locally.

Issues

The following issues were encountered and resolved during this sprint:

Issue	Description	Resolution
Multiple Boards Drawn	When New Random Board button is pressed before the board is loaded, the board is drawn twice.	Some boards take a while to render, but the button was still usable, allowing for multiple requests to be made before the first was finished rendering. Disabled the button and other board config options during rendering.
Buildings Stack	When adding buildings to a hex, they stack on top of each other.	Buildings are supposed to be exclusive, one per hex. Set up restrictions in the code.
Cannot Flip Some Tiles	Checkbox to flip some tiles are hidden on some screens	Setup of right side boardConfig items blocked checkboxes on left. Changed to flex display.
All Player Tokens Deleted	When in a player's turn, all player tokens are deleted	Added button to only remove one's own tokens during play

Sprint Burndown



Stand-Up Summaries

22 April 2024 – 29 April 2024	SPRINT 2
22 April 2024 Monday	After meeting with Naomi, it became apparent that for Sprint 2, we needed to ensure some level of code coverage. Additionally, we recognized that our user stories were too generic and needed to be broken down into more specific tasks. During the planning for this sprint, we addressed the backlogs from the previous sprint and devised strategies to rectify the issues. We also discussed everyone's schedules and noted that 2312053, 2596469, and 2550752 would be occupied with writing tasks tomorrow. Consequently, tasks were allocated proportionally, taking into account their other assignments.
23 April 2024 Tuesday	Some group members were dedicating their efforts to completing tasks from the previous sprint.
24 April 2024 Wednesday	2544808 initially started working on Code Coverage but encountered difficulties and got stuck. Consequently, 2312053 took over this task. 2544808 then shifted his focus to other tasks and aiding others in completing their tasks.

	Meanwhile, both 2539199 and 2550752 faced challenges in designing the database. Despite these difficulties, 2539199 managed to complete his other tasks, as did 2550752.
25 April 2024 Thursday	2544808 continued to face difficulties in submitting code to the GitHub account. As a solution, it was decided that he would send his work to other members until he resolves the issue. Meanwhile, 2312053 made progress with the code coverage. Both 2539199 and 2550752 encountered challenges with designing the database, prompting a change from MongoDB to SQL. Despite these obstacles, 2539199 completed his other tasks, as did 2550752. Lastly, 2596469 managed the UML diagram from the previous sprint.
26 April 2024 Friday	Most tasks were reassigned from 2544808 due to his loss of a family member. 2312053 took over his tasks. For further information, please contact him directly. Both 2539199 and 2550752 encountered difficulties connecting the deployed web app to the database. Despite these challenges, 2539199 managed to complete his other tasks, as did 2550752. In the meantime, 2596469 handled the UML diagram from the previous sprint.
27 April 2024 Saturday	2312053 paused her work on improving code coverage to address some tasks from 2544808. Meanwhile, 2550752 completed her other tasks but encountered difficulties in connecting the deployed web application to the web app. Unfortunately, 2539199 was unable to complete his tasks due to a power outage. Additionally, 2596469 managed the UML diagram from the previous sprint.
28 April 2024 Sunday	2312053 took on the majority of 2544808's tasks and made the decision to focus on improving the code coverage. Meanwhile, 2544808 completed one of his remaining tasks and also created one of the UML diagrams (Board Configuration). 2550752 encountered difficulties in connecting the deployed web application to the web app. On the other hand, 2539199 was unable to complete his tasks due to a power outage, which lasted the entire weekend. Despite these challenges, 2550752 managed to complete her other tasks. Additionally, 2596469 handled the UML diagram from the previous sprint.

29 April 2024 Monday	During the sprint retrospective and review, prior to meeting with Naomi, it was noted that 2544808 and 2539199 were not productive due to factors beyond their control. Additionally, 2544808 was informed that his slower pace in completing tasks was placing a burden on 2312053, who was attempting to complete not only her own tasks but also those of others. At that time, the code coverage was approximately at 17%.

Sprint Review – 2024-04-29

From the user stories selected, the following were completed:

- Take Turn In Game
    - Turn order fully implemented.
    - Uses a popup to query which action will be taken.
    - Prompts based on popups rather than game instructions. This means less mistakes during play.
    - Forces active player to place a cube if a cube has been placed during the turn before passing to the next player.
- Take Question Action
    - Sequencing fully implemented.
    - Popup prompts active player to select a different player to question.
    - Popup then queries the prompted player, displaying their clue and asking if the hex is valid according to their clue. If yes, a disk is placed. If no, a cube is placed.
    - Other players still able to see the prompted player's clue since there is no prompt to pass.
- Take Search Action
    - Sequencing fully implemented.
    - Once Search Action is picked, a disk from the active player is placed on the selected hex before passing to the next player in turn order.
    - Popup then queries the prompted player, displaying their clue and asking if the hex is valid according to their clue. If yes, a disk is placed and play passes to the next player. If no, a cube is placed and the sequence ends.
    - If play returns to the active player with no placed cubes, popup announces that active player has won the game.
- Record Games
    - While the game is played, changes are recorded in a local object.
    - Object can then be saved as a JSON object in a database.

Other tasks finished:

- Draw UML diagrams
    - 4 out of 5 views complete.
- Set up database
    - Set up, but not integrated to any site.
- Start Unit Testing

    - Difficult with many DOM elements.
- Add code coverage to GitHub
    - Using codecove for coverage reports; Jest reports used as backup.

Sprint Retrospective – 2024-04-29

- The Bad
    - Azure site went down.
        - Review done using Github page.
    - Backend integration taking even more time than expected.
    - Jest testing is a nightmare
    - Issues relating to work commitment from team members.

- The Future
    - Focus more on Unit Testing (Jest)

Sprint 3 – 2024-04-30 to 2024-05-06

Sprint Backlog

For this sprint, the following user stories were selected:

User Story	Points	Description
Game Review	3	As a Player, I want to review a game I played turn by turn in order to improve my gameplay.
Visualise Board	7	As a Player, I want to visually see the board and state of the game on the screen.
Login	10	As a Player, I want to login to the site in order to access my saved games.
Save Games	10	As a Player, I want to save the games I play to access them at a later date for analysis.
Filter Saved Games	6	As a Player, I want to filter my saved games based on various criteria (clue type, difficulty, number of rounds, etc.) so that I can practise specific strategies.
Custom Game Setup	4	As a Player, I want to set up a game using a predetermined board and set of clues.
Save Custom Games	3	As a Player, I want to be able to save the games I started using a custom setup.

Game Review

Task	Description
Setup Game Start from Save Game	From the saved game object, change the board elements to reflect the board setup and the players' initial cube placements. Possibly also display this information as text. Possibly display the cryptid's location during review.
Show Turn Moves On Board	Going turn by turn, the tokens placed on the board during a turn should be shown on the board, along with markers to help the player find them during review.
Show Turn Information	Going turn by turn, information such as whose turn it is, which hex was selected, what action they took, who responded and how should be displayed when reviewing the turn.

Visualise Board

Task	Description
Visualise Tiles	Show the tiles of the board visually on the screen based on the board object.
Visualise Animal Habitats	Show the bear and cougar habitats on the board based on the tile layout stored in the board object.
Visualise Buildings	Show the buildings on the board based on their position saved in the board object.
Visualise Player Tokens	Show player tokens on the board based on their locations in the board object.
Visualise Cryptid Location	Show the cryptid's location on the board when needed based on its location in the board object.

Login

Task	Description

Setup and Connect Database	Setup the database to store user id and games.
Setup Google Auth	Setup Google Auth for login to the site.
Integrate with Azure Site	Integrate Google Auth and Database with Azure site.
Connect Pages	Connect home, login and profile pages for navigation

Save Games

Task	Description
Setup and Connect Database	Setup the database to store games.
Save Game Format for Database	Format the game object to a JSON object and other fields for filtering in the database.
Save Local Recorded Games to Database	Save local recorded game object to the database.
Load Saved Game from Database	Load a saved game from the database for review.

Filter Saved Games

Task	Description
Filter based on number of players	Filter list of saved games to choose from by number of players.
Filter based on clue type	Filter list of saved games to choose from by clue type.

Custom Game Setup

Task	Description
Customise Player Clues	Select clues for each player to set up a game.
Customise Cryptid Location	Select hex as cryptid location.
Start Custom Game	Start the game with a custom setup.

Save Custom Game

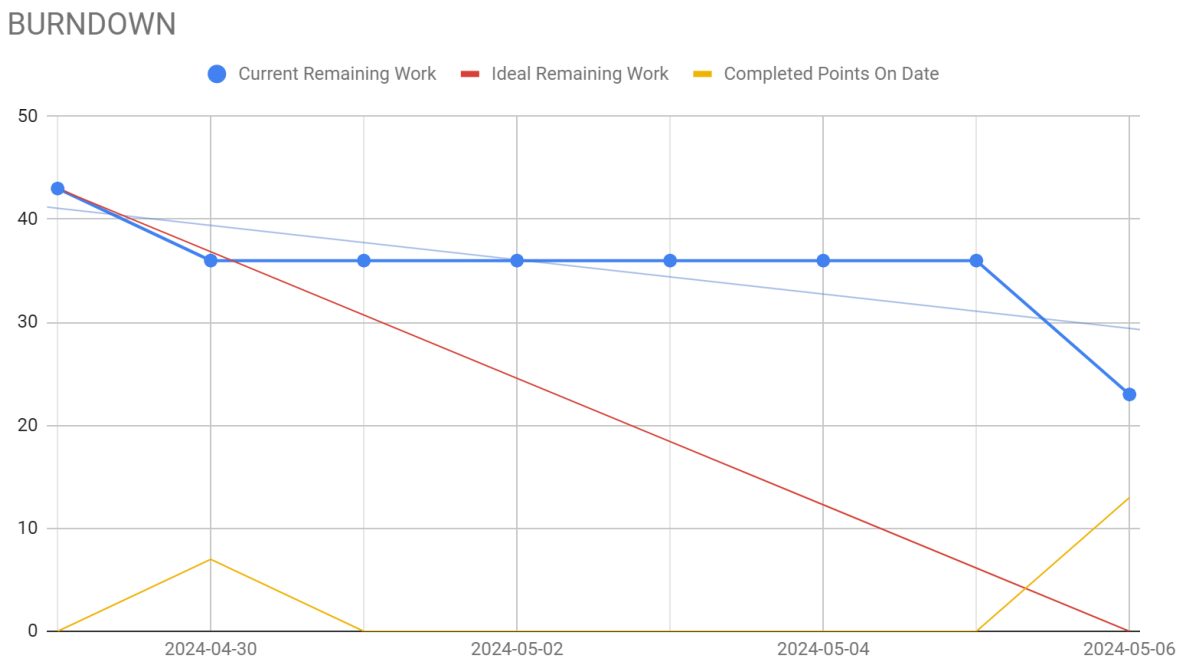
Task	Description
Record Custom Game	Record the custom game in the same way recording is done for the random game setup.
Save Game to Database	Save the recorded game to the database.

Issues

The following issues were encountered and resolved during this sprint:

Issue	Description	Resolution
Can Add Disks During Setup	Players can add disks during setup, which is not allowed by the rules	Disabled all disk buttons during setup

Sprint Burndown



Stand-Up Summaries

29 April 2024 – 08 May 2024	SPRINT 3
29 April 2024 Monday	Following our meeting with Naomi, we learned that we're testing everything, including HTML and CSS, which has resulted in a low code coverage. We also discussed strategies for managing the backlog from previous sprints. Considering everyone's schedules, with many having exams and assignments due, and 2544808 and 2539199 having exams on Friday, we decided to postpone our sprint planning until tomorrow to accommodate everyone's availability.
30 April 2024 Tuesday	Following the sprint planning meeting, we assigned tasks as follows: - 2312053 will continue with unit testing. - 2539199 and 2550752 will work on database integration, focusing on saving games from local machines into the database and loading stored games from the database. - 2544808 and 2596469 were tasked with creating Custom Board States, which involves creating specific boards with clues and enabling gameplay from those boards.

	Additionally, 2544808 communicated that he won't be available this weekend due to attending a family member's funeral. For further details, please reach out to him directly.
01 May 2024 Wednesday	We communicated our progress to Andrew via the Discord server, updating him on our status. Despite encountering challenges, each team member continued to make progress in their respective tasks.
02 May 2024 Thursday	Despite facing challenges, each team member made progress in their allocated tasks. Additionally, they began drafting their respective UML diagrams as part of the ongoing work.
03 May 2024 Friday	2539199 and 2550752 encountered difficulties connecting the database to the deployed system. Consequently, 2596469 took over the custom board tasks as 2544808 had familial obligations to fulfil. Additionally, 2312053 managed to increase the code coverage to 18%.
04 May 2024 Saturday	Despite the challenges posed by load shedding, progress was being made. However, the integration of the database remained incomplete. Meanwhile, 2539199 is nearing completion of the login page, which still needs to be integrated with the database.
05 May 2024 Sunday	2312053 has managed to increase code coverage to 30% and remains confident that it could reach 40%. Additionally, 2544808 has returned to assist 2596469 in completing the nearly finished Custom Board. However, the database team reported that while the database functions properly on localhost, it malfunctions when deployed. Despite this setback, they are optimistic about resolving the issue soon.
06 May 2024 Monday	2539199 supplied the activity diagram for the web app. However, due to labs being unavailable due to load shedding, Naomi proposed postponing the marking until Wednesday at lunchtime. As of now, the Custom Board remains incomplete.
07 May 2024 Tuesday	Today, progress was limited as most of the group was occupied with writing tasks, while the remainder had to complete assignments due. Despite this, some backlog and tasks were accomplished.
08 May 2024 Wednesday	Team collaboration and morale reached an all-time low, but we just managed to fulfil most of our tasks. Unfortunately, 2544808 shared the news of another family loss. (Please reach out to him for additional details.) During the review and retrospective, we addressed the significant backlog resulting from incomplete tasks and poor work rate. It was evident that many user stories formed this sprint were merely extensions of those from the previous sprint, leading us to recycle the UML diagrams.

Sprint Review – 2024-05-08

From the user stories selected, the following were completed:

- Game Review
    - Using an inbuilt game object for testing, the review process has been fully implemented.

    - During review the tokens were not being drawn on the board. This is an issue to be fixed in the next sprint.
- Visualise Board
    - A visual board has been used for testing purposes since sprint 1, but the user story was never added to sprint 1 for review.
- Login
    - Separate login page from main game page for now.
    - Still asks for login first before the landing page is reached. Then the login button goes to the profile page directly.

The following user stories were not completed:

- Save Game
    - While the database is online and set up, integrating with the game page and login pages have been very difficult.
    - Moved from MongoDB to Azure SQL Server more than once. Settled on Azure.
- Filter Saved Games
    - SQL queries have been written to filter saved games, but since the database is not integrated, it cannot be tested using the app.
- Custom Game Setup
    - Not started due to poor time management with more academic obligations.
- Save Custom Game
    - Not started due to poor time management with more academic obligations.

The following tasks have also been completed:

- Unit Testing up to 45%.

Sprint Retrospective – 2024-05-08

- The Bad
    - Azure site still down.
        - Review done using Github page.
    - Backend integration still gives issues.
    - Spoke about commitment to completing assigned user stories.

- The Future
    - Focus more on Unit Testing (Jest)
    - Get the backend integration working.
    - Software Design test next week, so there will be less work done during the first week of Sprint 4.

Sprint 4 – 2024-05-07 to 2024-05-20

Sprint Backlog

For this sprint, the following user stories were selected:

User Story	Points	Description
Save Games	10	As a Player, I want to save the games I play to access them at a later date for analysis.
Filter Saved Games	6	As a Player, I want to filter my saved games based on various criteria (clue type, difficulty, number of rounds, etc.) so that I can practise specific strategies.
Custom Game Setup	4	As a Player, I want to set up a game using a predetermined board and set of clues.
Save Custom Games	3	As a Player, I want to be able to save the games I started using a custom setup.

Save Games

Task	Description
Setup and Connect Database	Setup the database to store games.
Save Game Format for Database	Format the game object to a JSON object and other fields for filtering in the database.
Save Local Recorded Games to Database	Save local recorded game object to the database.
Load Saved Game from Database	Load a saved game from the database for review.

Filter Saved Games

Task	Description
Filter based on number of players	Filter list of saved games to choose from by number of players.
Filter based on clue type	Filter list of saved games to choose from by clue type.

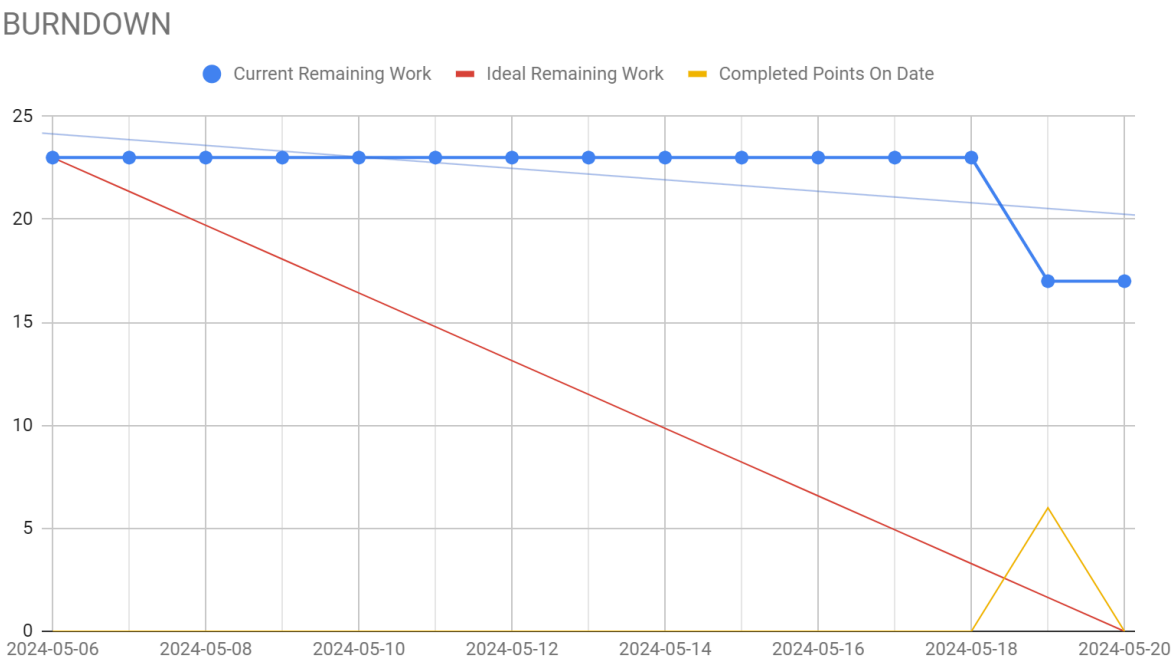
Custom Game Setup

Task	Description
Customise Player Clues	Select clues for each player to set up a game.
Customise Cryptid Location	Select hex as cryptid location.
Start Custom Game	Start the game with a custom setup.

Save Custom Game

Task	Description
Record Custom Game	Record the custom game in the same way recording is done for the random game setup.
Save Game to Database	Save the recorded game to the database.

Sprint Burndown



Stand-Up Summaries

08 May 2024 – 20 May 2024	SPRINT 4
08 May 2024 Wednesday	Following the meeting with Naomi, we recognized the necessity of linking our database to both the login page and the web app.
09 May 2024 Thursday	We convened and reviewed our tasks, opting to prioritize completing the existing ones rather than assigning new ones. Progress was limited due to upcoming exams, with some individuals having to write twice. Recognizing 2544808's inability to concentrate, it was decided for him to attend the funeral. Although a few tasks were assigned, the majority of our focus remained on clearing the backlog.
10 May 2024 Friday	As anticipated, no progress was made today as we were all occupied with writing tasks. However, during our daily scrum at the end of the day, the database team reported encountering a peculiar bug, which was causing the delay in linking the database. Despite this setback, they remained optimistic about identifying and resolving the issue.

11 May 2024 Saturday	Due to the server failure at the data provider, 2312053 had to shift her focus from her main task to assisting others. She helped both 2544808 and 2596469 with the custom board. Meanwhile, the database team identified and resolved one bug, but encountered another; the database couldn't capture the user ID when a new user logged in. 2544808 believed he fixed the issue with his GitHub and intended to push all his code. However, it was explained that even if he managed to push the code, it might overlap with existing code pushed by others, potentially leading to conflicts.
12 May 2024 Sunday	Although it's not ideal, we recalled our meeting with Andrew where he mentioned that a login platform wasn't a critical requirement. Therefore, we decided that if the database isn't functioning by the submission deadline, we will store the data locally. In the meantime, we remain hopeful that our team can debug the issue. 2312053 and 2596469 continued working on the custom board while 2544808 was away. The team was encouraged to focus on the test tomorrow, and we plan to resume our efforts afterward.
13 May 2024 Monday	After the test, 2544808 joined 2596469 and 2312053 to work on the custom board and offered to provide evidence for attending two funerals if asked. The database team reported that the database worked locally, but the deployed instance was faulty, and they couldn't resolve the issue.
14 May 2024 Tuesday	2312053, 2596469, and 2544808 completed the custom board and all associated features. 2544808 and 2539199 were excused due to their FLA and another math test on Friday. 2550752 completed most of her tasks..
15 May 2024 Wednesday	2539199 completed the task of saving locally recorded games to the database, but both 2539199 and 2550752 encountered issues integrating the web app with the database. 2312053 provided assistance to everyone as needed.
16 May 2024 Thursday	Today's progress was limited as everyone was preparing for tomorrow's test.
17 May 2024 Friday	While some backlogs were completed, the database continued to be a significant issue.
18 May 2024 Saturday	While some backlogs were completed, the database continued to be a significant issue.
19 May 2024 Sunday	Some backlogs were addressed, but the database remained a significant issue. UML diagrams were created, and code coverage reached 60%.

20 May 2024 Monday	After reviewing the project, we accepted that the database wouldn't be used and instead, data will be stored locally. While there are security concerns, our team dedicated countless hours to fixing bugs, but unfortunately, they couldn't deliver the desired results. Team member 2312053 was praised for effectively managing 2544808 during difficult times. Regrettably, we couldn't achieve the project we envisioned. For future projects, we agreed to avoid creating monolithic code, as it overwhelmed most team members. Communication was a recurring problem; team members often produced duplicate code due to lack of communication. Additionally, some individuals completed tasks without updating Taiga, notifying the group, or pushing code to GitHub, leading to redundant work when others unknowingly repeated the same tasks.

Sprint Review – 2024-05-20

From the user stories selected, the following were completed:

- Custom Game Setup
    - Dropdown lists used to select clues for each player.
    - Added button to add feature popup to set cryptid location.
    - Checks for the number of players based on how many clues are selected.
    - Gameplay then starts as if a random game was set up.

The following user stories were not completed:

- Save Game
    - Database integration is still not working.
    - All other infrastructure to save and display saved games is in place.
- Filter Saved Games
    - SQL queries have been written to filter saved games, but since the database is not integrated, it cannot be tested using the app.
- Save Custom Game
    - Database integration is still not working.
    - All other infrastructure to save and display saved games is in place.

The following tasks have also been completed:

- Unit Testing up to 52%.

Sprint Retrospective – 2024-05-20

- The Good
    - Custom board start working better than expected.
- The Bad
    - Azure integration is still not complete. Both the database and login.
    - Unit Testing is very tedious.

- The Future
    - Get the database integrated before the final submission date.
    - Write-up formal documentation for final submission.