**Digital Technologies & Hangarau Matihiko 2.8**

**Level Two, Credits 6, Assessment Internal**

Introduction/Kupu Arataki

This assessment activity requires you to plan, develop and create a complex computer program.

You will be assessed on

* how effectively you use project management tools and techniques to plan and manage the development of a digital outcome
* how effectively you decompose the problem into smaller components, and test and refine your media outcome so that it is a high-quality response to the task
* how well you have addressed relevant implications
* how well you discuss how the information from the planning, testing and trialling of components assisted in the development a high-quality response to the task (e.g. well-structured, logical, flexible, robust and comprehensively tested program)

Problem Statement

Maui's discovery of Aotearoa

A text-based video game is a genre also known as "interactive fiction". This was very popular back in the day when there was an absence of video game graphics and you had to use your imagination. The game's environment and the actions you take are described for you. You are going to develop your own text-based adventure game based on the story of Maui's discovery of Aotearoa. You will follow in Maui's footsteps as he navigated his waka to find the land we now live in.

Decomposing the outcome

* ***decomposing the digital technologies outcome into smaller components***

|  |  |  |  |
| --- | --- | --- | --- |
| Maui’s discovery of Aotearoa.  Text based game | Gameplay | fish | collection |
| spawning |
| Quality gambling? |
|  |
| movement |  |
|  |
| map | generation |
|  |
|  |
|  |  |
| UI | Main menu |  |
|  |
| Controls | Movement  -WASD/arrow keys |
|  |
| Commands | save |
| load |
|  |
|  |  |
|  |  |
|  |  |  |
|  |  |
|  |  |
|  |  |  |

Considering Relevant Implications

* ***addressing relevant implications.***

*What relevant implications do you need to consider in the development of your outcome? Describe which you will address in its development.*

*Examples of relevant implications include:*

* *social*
* *cultural*

the customary beliefs, social forms, and material traits of a racial, religious, or social group  
- How do you ensure your outcome is inclusive?  
- Could you have something on there that is offensive to a culture?

This implication is relevant to my program as it is based on a cultural significant story and by not addressing this implication it could be considered an insult to the culture

* *legal*
* *ethical*
* ***intellectual property***
* *privacy*
* *accessibility*
* *usability*
* *functionality*

The state of an app, website or database being useful.  
  
How useful is your outcome? Does it do what the client wants? How do you know? Can anyone use it? Could testing help ensure that your outcome is functional? Do people know how to use it?

This implication is relevant to my program as if it is not functional then it would be boring, and people would not want to play it

* *Aesthetics*

a set of principles concerned with the nature and appreciation of beauty.

This implication is relevant to y program because it has text based graphics and these need to look good and be distinguishable to the user for them to be able to play the game properly

* *sustainability and future proofing*
* *end-user requirements*
* *health and safety.*

*Source of implications definitions:* [*https://www.freybergdigital.co.nz/relevant-implications.html*](https://www.freybergdigital.co.nz/relevant-implications.html)

To address the functionality of movement instead of asking the user to input which direction they want to move and pressing enter every time they want to move consuming time I will implement movement in a form that is seen in almost every game by using by default “wasd” for movement of the character making it take less time and making it easier.

To address the implication of aesthetics I will implement ascii art for representing each tile and buttons in the menu such as “Start” to make it look nicer than just some plain text I will also implement nice borders around the tiles

To address the implication of culture wherever I refer to objects such as the Waka I will ensure to use the correct terminology based on the culture indicated by the character that you play as (Maui) so I will not refer to the Waka as the boat as an example but other than items such as the Waka the majority of text will be in English to allow for a wide audience to understand what is going on.

Sprint Tracking

|  |  |  |
| --- | --- | --- |
| **Sprint Number** | **Start Date** | **End Date** |
| 1 | 16/08/21 | 27/08/21 |

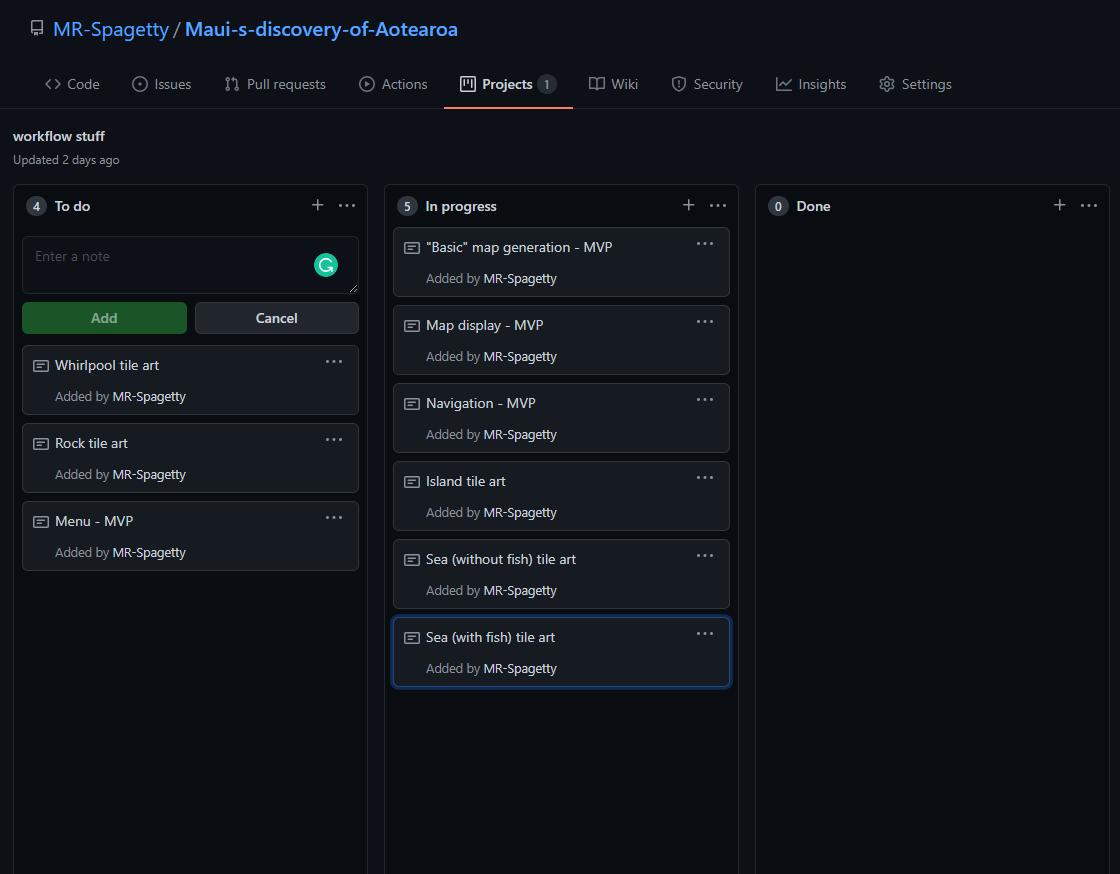
* ***using recognised and appropriate project management tools and techniques to plan the development of a digital technologies outcome***

# Planning

*What are you going to work on in this sprint?*

* *Map generation*
* *Navigation(movement)*
* *Tile art*
* *Miscellaneous controls*

*Provide evidence (screenshot / photo) of your project management tool(s) being used to plan the development of your outcome at the beginning of your sprint here*



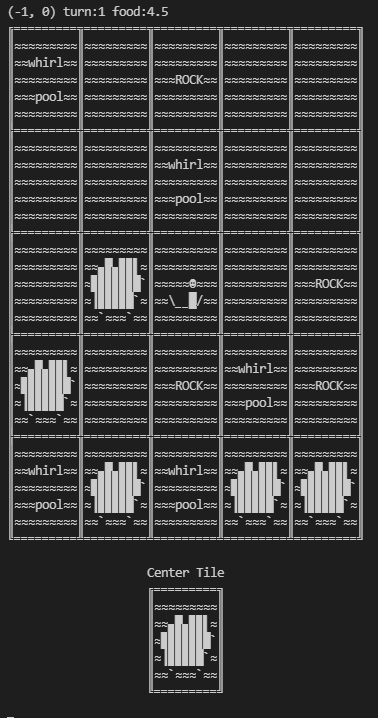
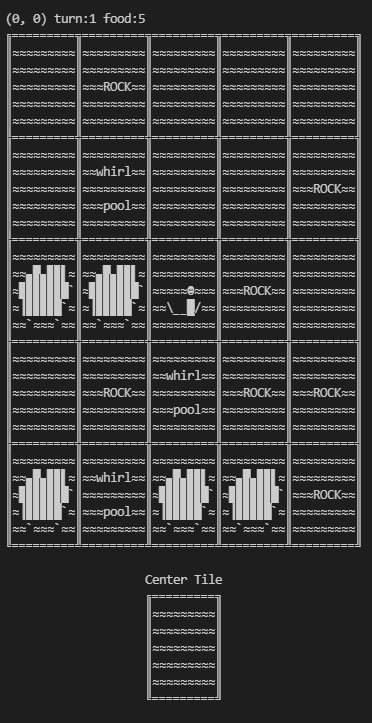
# Development

*What components are you going to trial?*

*Map generation*

*movement*

*Provide evidence of the options you are going to trial.*

**

## Feedback

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Help | | |
| **Name** | Rob Wallace | **Date** | 26/08/2021 |
| **Feedback** | Include a key of what each tile is and does | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Gameplay | | |
| **Name** | Rob Wallace | **Date** | 26/08/2021 |
| **Feedback** | Plays well | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Rocks | | |
| **Name** | Rob Wallace | **Date** | 26/08/2021 |
| **Feedback** | Incorporate a message that tells the user when they hit a rock that they did so and remove some food | | |

*What is the outcome of this feedback?*

There is now a message that tells the user that they have hit a rock and on the hardest difficulty they remove food

A key for what each tile type means will be implemented

## Testing

***Brief Description of what you are testing***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type of test**  **(E, B, I)** | **Method to Test** | **Value(s) to enter** | **Expected result** | **Actual result (screen snip / time stamp)** | **Comments/ changes needed** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## Evaluation

*Sprint reflection and summary*

*I feel I did well in this sprint however I forgot to record my testing*

*In this sprint I created a MVP of my program got a few bits of user testing on the program and some user feedback some if which I have already implemented*

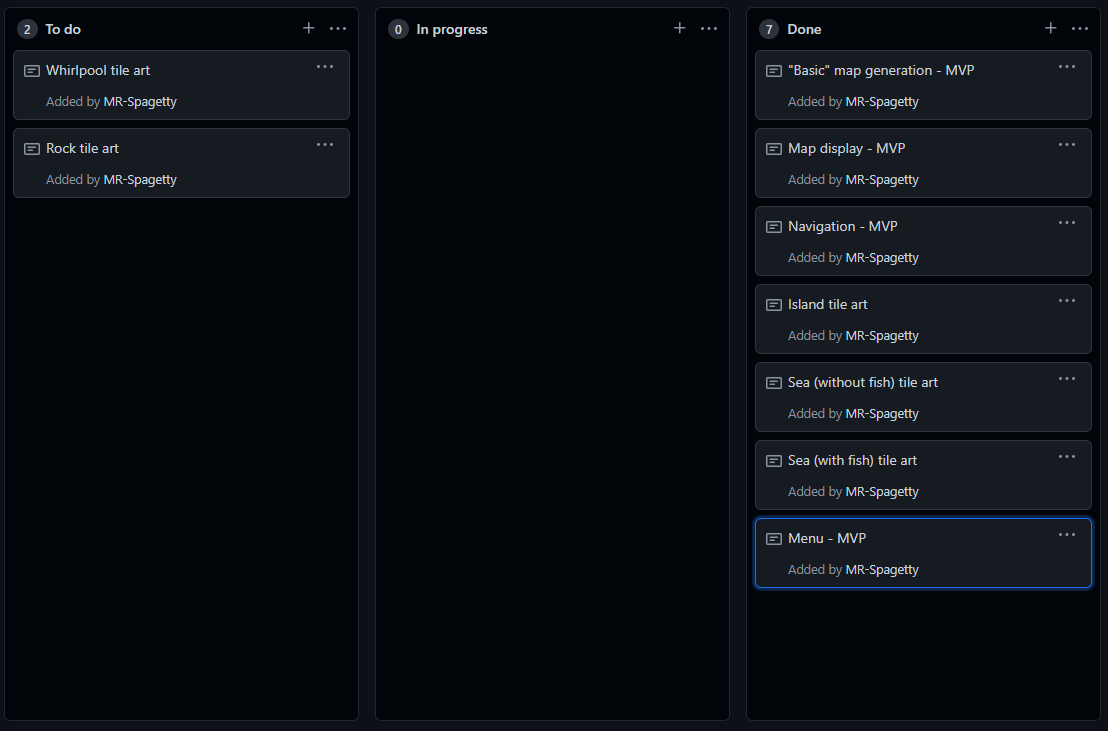
*What major changes and achievements did you complete in this sprint?*

*I was able to code the entirety of the MVP (minimum viable product)*

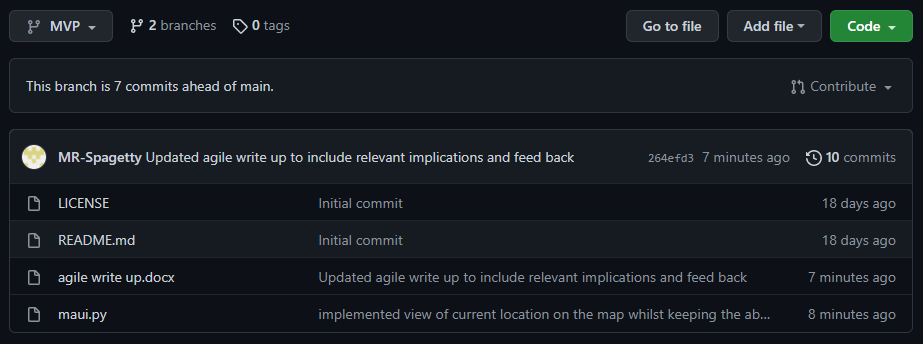
*What are you going to do in your next iteration?*

*In my next iteration I will attempt top implement tile art for the whirlpool and rock tiles as well as give the whirl pools some actual functionality*

*Provide evidence (screenshot / photo) of your project management tool(s) being used to manage the development of your outcome at the end of your sprint here*

**

*Provide evidence (screenshot) of your version control*



Sprint Tracking

|  |  |  |
| --- | --- | --- |
| **Sprint Number** | **Start Date** | **End Date** |
| 2 | 01/09/2021 | 10/09/2021 |

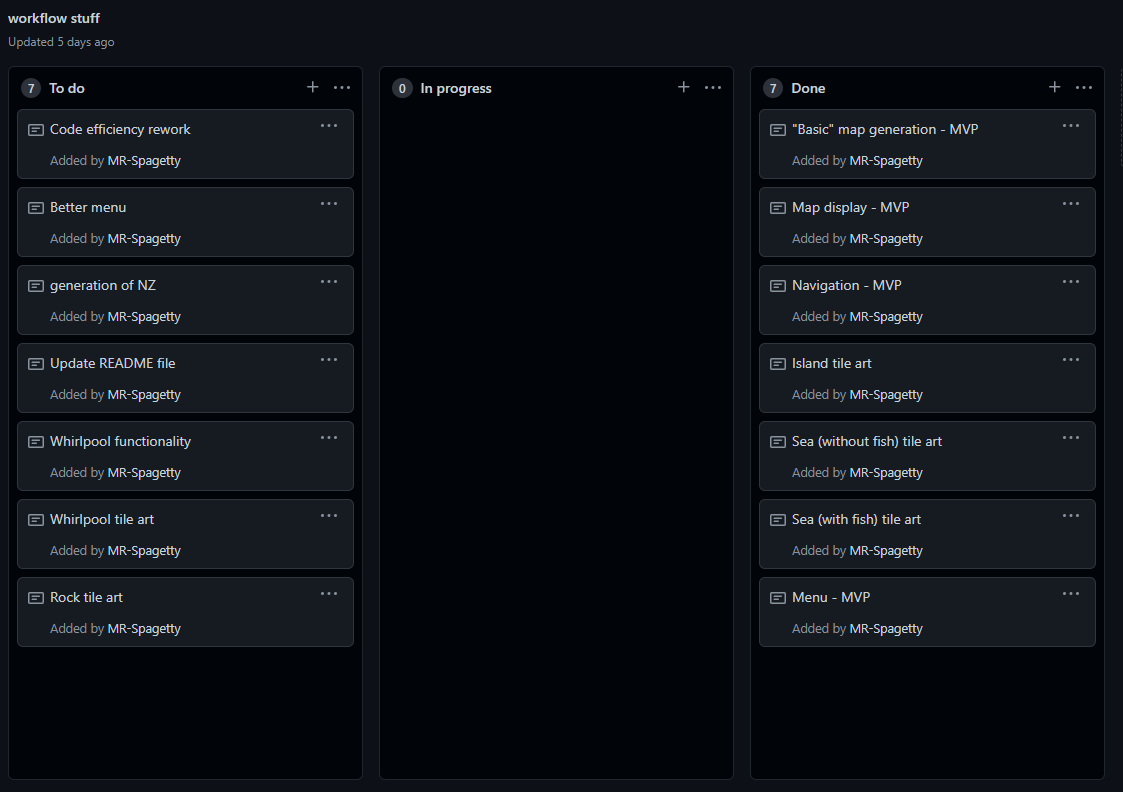
* ***using recognised and appropriate project management tools and techniques to plan the development of a digital technologies outcome***

## Planning

*What are you going to work on in this sprint?*

* Rework of code
* Giving while pools a function
* Work on README file
* Logic for hitting a rock

*Provide evidence (screenshot / photo) of your project management tool(s) being used to plan the development of your outcome at the beginning of your sprint here*

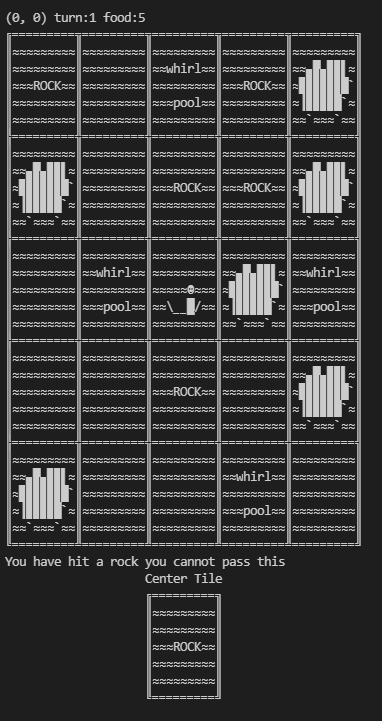


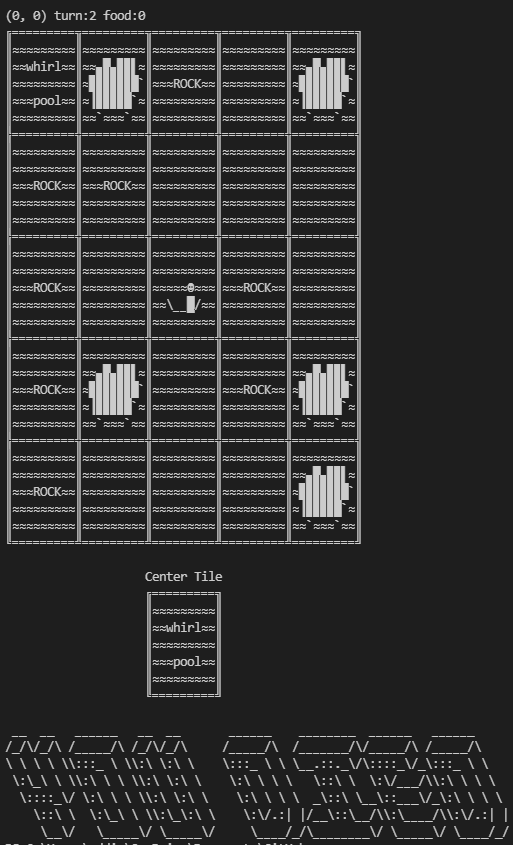
# Development

*What components are you going to trial?*

* *Whirlpools*
* *Hitting a rock*

*Provide evidence of the options you are going to trial.*

**



## Feedback

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Map Display | | |
| **Name** | Diego Mezza | **Date** | 10/09/2021 |
| **Feedback** | The tiles for sea, fish, rock and whirlpool look kind of similar. So when you move sometimes it’s kind of hard to see where you went. If they were more different it’d be easier to navigate. I like the tile for the boat | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Map display | | |
| **Name** | Phil McRack | **Date** | 11/09/2021 |
| **Feedback** | Your placeholders for the rock and whirlpool tiles are hard to make out amongst the sea tiles and it is hard to see where fish are in the sea and if they are there at all. The island tiles kinda look like chicken nuggets but work for the situation | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Map display | | |
| **Name** | Ben Dover | **Date** | 11/09/2021 |
| **Feedback** | I am unable to see where the fish are in the sea if they are even there at all | | |

*What is the outcome of this feedback?*

I need to make some tile art for the rock and whirlpool tile’s and make the fish more visible in the fish tile

## Testing

***Brief Description of what you are testing***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type of test**  **(E, B, I)** | **Method to Test** | **Value(s) to enter** | **Expected result** | **Actual result (screen snip / time stamp)** | **Comments/ changes needed** |
| Expected | Move character into rock | S | Character would not move and a message would be displayed stating that the player had hit a rock |  | None |
| Expected | Move character into whirl pool | A | Character would be affected by one of the possible whirlpool events |  | Corrected attribute name where accessed to “last\_seen\_chart” |
| Expected | Move character into whirl pool | W, S | Character would be affected by one of the possible whirlpool events |  | None |
| Expected | Movment | W,a,s,d | Character would move in these directions assuming no rock is in the way | Button log from video: wasaaawwddwd | None |
| Expected | Help | H, enter | Open and close help |  | None |
| Expected | Quit | Q, y | Player would be prompted if they want to quit then if y is pressed the game would quit |  | None, unsure why it is stating that I have hit a rock could be something to do with the whirl pool I am on |

## Evaluation

*Sprint reflection and summary*

*I did well this sprint and remembered to actual test my code and also redid the testing from sprint 1 so that it is documented*

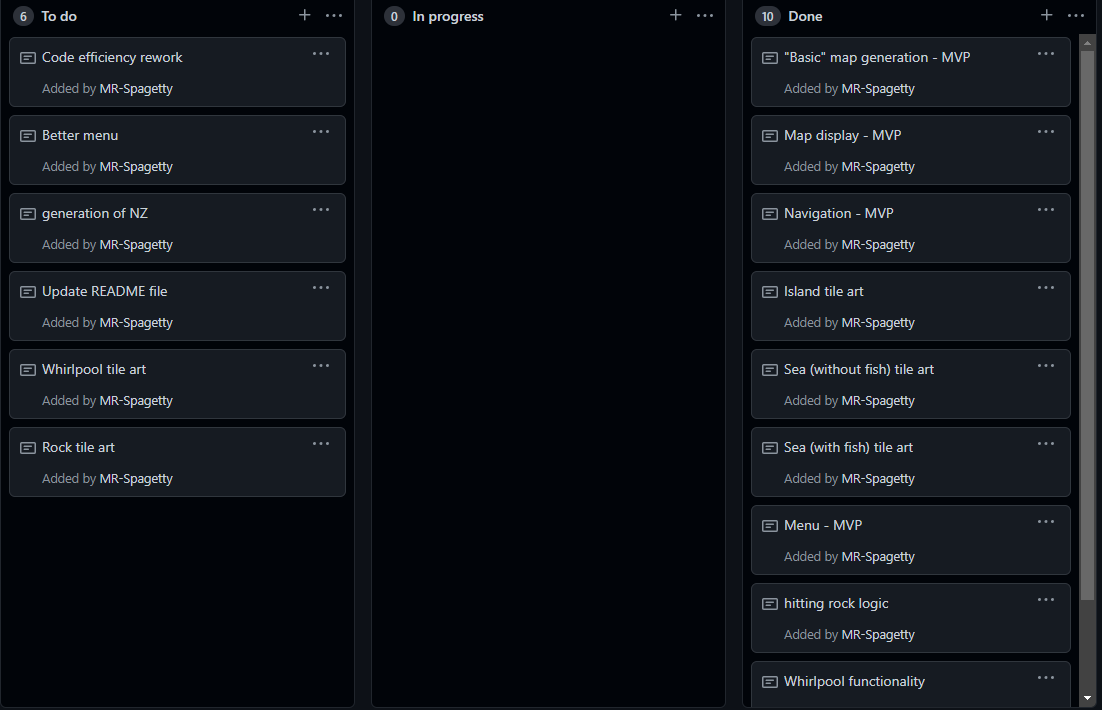
*What major changes and achievements did you complete in this sprint?*

*In this sprint a gave whirlpools actual functionality*

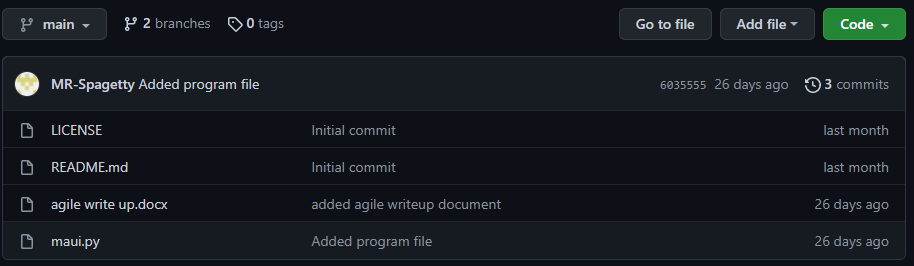
*What are you going to do in your next iteration?*

*In my next iteration I will work on ascii art for the rock and whirlpool tiles*

*Provide evidence (screenshot / photo) of your project management tool(s) being used to manage the development of your outcome at the end of your sprint here*

**

*Provide evidence (screenshot) of your version control*



Sprint Tracking

|  |  |  |
| --- | --- | --- |
| **Sprint Number** | **Start Date** | **End Date** |
| 3 | 14/09/21 |  |

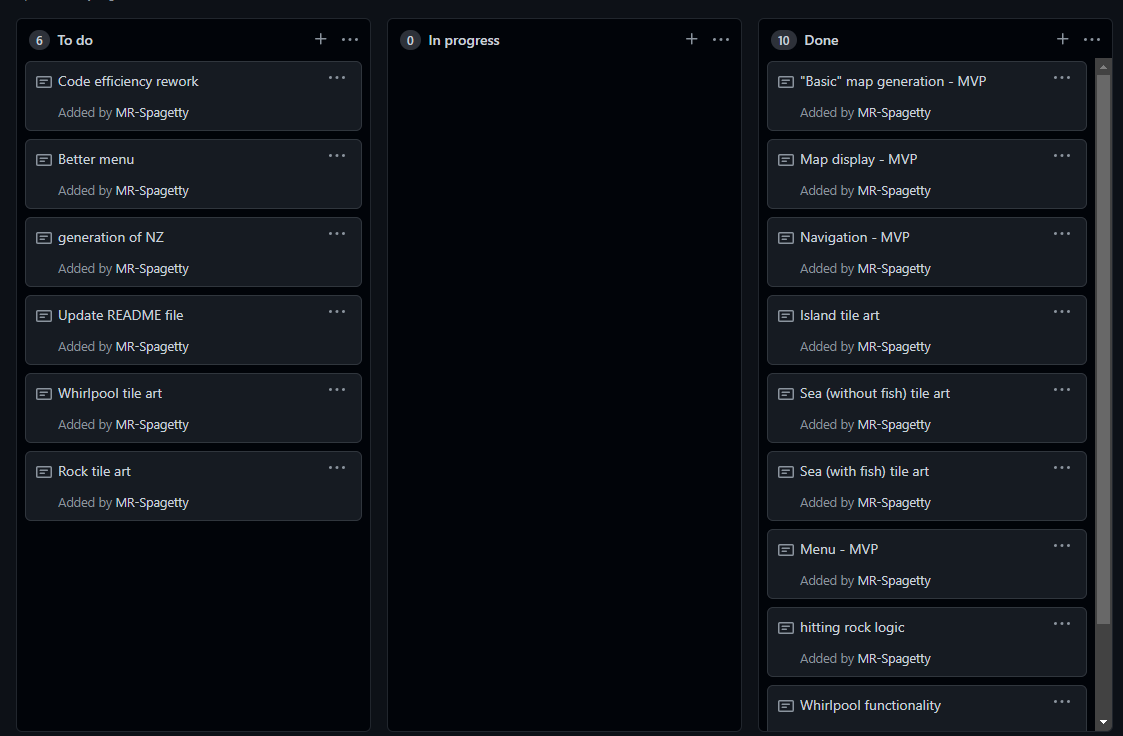
* ***using recognised and appropriate project management tools and techniques to plan the development of a digital technologies outcome***

## Planning

*What are you going to work on in this sprint?*

* Generation of Aotearoa
* Rock and whirlpool tile art
* Better menu system
* Update README file

*Provide evidence (screenshot / photo) of your project management tool(s) being used to plan the development of your outcome at the beginning of your sprint here*



# Development

*What components are you going to trial?*

* *Whirlpool and rock looks*
* *New menu*
* *Generation of NZ*

*Provide evidence of the options you are going to trial.*

*Whirlpool rock*

**

North island



## Feedback

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | gameplay | | |
| **Name** | Alan Teesdale | **Date** | 16/09/2021 |
| **Feedback** | How do I get to Aotearoa? Perhaps add a way for the user to see where they need to go. | | |
| **Response** | Maui had no clue where he was going so neither should you  However, I will decrease the goldilocks zone’s distance from 0,0 | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Whirlpools | | |
| **Name** | Alan Teesdale | **Date** | 16/09/2021 |
| **Feedback** | I would make whirlpools Either transport you or kill you rather than a random chance of either. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Gameplay | | |
| **Name** | Sam | **Date** | 22/09/2021 |
| **Feedback** | It seems quite difficult to find Aoteroa, as it seems too easy to lose fish and too hard to gain a significant number of fish, in any of my testing even on the easiest difficulty, I couldn’t find the island. In addition, you also don’t know where the island is meaning that the number of tiles needed to search is very high, you may consider, making the island closer to the player.  In addition, the fish tiles are hard to distinguish from the regular sea tiles. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Gameplay | | |
| **Name** | Henry | **Date** | 22/09/2021 |
| **Feedback** | Very very interesting. It looks awesome and shows some really unique coding. The fish tiles are hard to find however. But overall very fun. | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Gameplay | | |
| **Name** | Jacob | **Date** | 22/09/2021 |
| **Feedback** | Whirlpools do not feel like they are worth considers at all as almost all possible outcomes are negative.  The game feels too directionless and leads to you getting bored wandering around randomly. Some way to have a feeling of progress would be nice maybe like a counter saying how far away you are in tiles | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Gameplay | | |
| **Name** | Kieran Cassidy | **Date** | 22/09/2021 |
| **Feedback** | Very fun game. Once I actually decided to read the help page it all made sense and worked perfectly | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Gameplay | | |
| **Name** |  | **Date** | 22/09/2021 |
| **Feedback** |  | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | Gameplay | | |
| **Name** |  | **Date** | 22/09/2021 |
| **Feedback** |  | | |

*What is the outcome of this feedback?*

I decreased the distance from 0, 0 that Aotearoa can generate

## Testing

***Brief Description of what you are testing***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type of test**  **(E, B, I)** | **Method to Test** | **Value(s) to enter** | **Expected result** | **Actual result (screen snip / time stamp)** | **Comments/ changes needed** |
| I | Key input | H | Rejected as h is already in use |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## Evaluation

*Sprint reflection and summary*

I feel that this sprint I did well completing all that I needed to do quickly

*What major changes and achievements did you complete in this sprint?*

In this sprint I added a way for the user to select which keys they want to use to move and made tile art for whirlpools, rocks, and the north island of Aotearoa

*What are you going to do in your next iteration?*

If I were to do another iteration, I would make my code faster and more efficient

*Provide evidence (screenshot / photo) of your project management tool(s) being used to manage the development of your outcome at the end of your sprint here*

*A screenshot of a computer

Description automatically generated with medium confidence*

*Provide evidence (screenshot) of your version control*

*A screenshot of a computer screen

Description automatically generated with medium confidence*

Project Summary

* ***addressing relevant implications.***

*How did you address the relevant implications in the development of this outcome?*

To address the functionality of movement instead of asking the user to input which direction they want to move and pressing enter every time they want to move consuming time I have implemented movement in a form that is seen in almost every game by using user inputted key bonds for movement of the character making it take less time and making it easier.

To address the implication of aesthetics I have implemented ascii art for representing each tile and buttons in the menu such as “Start” to make it look nicer than just some plain text I have also implemented nice borders around the tiles

To address the implication of culture wherever I refer to objects such as the Waka I have ensured to use the correct terminology based on the culture indicated by the character that you play as (Maui) so I have not referred to the Waka as the boat as an example but other than items such as the Waka the majority of text is in English to allow for a wide audience to understand what is going on.

* ***discussing how the information from planning, testing and trialling of components assisted in the development of a high-quality outcome.***

*How did the process help to shape the development of your outcome? Provide evidence.*

Planning helped to give me structure in my work telling me when I needed to what and when by, this structure allowed me to work faster in the given time periods thus I was able to get more done and was more efficient with my code and work.

Testing helped me find the bugs and other issues in the code and how my program ran without testing for all I knew my code could just immediately crash when the user tried to start it.

Trialling helped me to find out what my end users liked and dislike about my program and what I could improve to make my end users like my program more.  
Version control helped me to ensure that if anything happened to my program weather it be file corruption or loss of my computer I would still be able to continue working from the last version of the code that I could and not having to start from scratch.