# AS91897 Production Log

## Brief

**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.

 Your character should be able to navigate the sea, pick up food (fish) along the way and discover parts of Maui's story along the way to find Aotearoa which is randomly allocated to the board at the start of the game, as is your starting position. Every two moves mean you eat one of your items of food (you start with 3). The board has fish randomly allocated. If you run out of food the game is over.

It is recommended that you do NOT make the sea larger than a 5x5 grid.

## End Users:

My target audience for this project will be the students in this digital class and Mr Ny.

## Relevant Implications

### Social

The social implication is that we must consider gender neutral and whether it will be formal or informal language in accordance to the target audience.

My target audience is school children therefore I will choose to use an informal language as it will be more relatable.

I will get stakeholder feedback from students of the target age group at stage 1 to establish if I have used language appropriate to that age group.

### Legal + Intellectual Property

The legal implication is that we must ensure that all resources used should be copyright free and/or used with permission.

I will provide credits at the end of my program if I used resources with permission to ensure that I haven’t taken

### Cultural

I will consult and survey people of Maori heritage to make sure that my program is not culturally insensitive, as well as research the legend properly with a wide range of sources.

UPDATE: I have secured 2 Maori stakeholders, Olivia and Collis

### Privacy

I will ensure that my program only stores data related to the game that does not contain any personal information. The player will be given no explicit prompt to enter personal data, and if they do none of the variables that are stored contain information not relating to the game.

### End User

### Aesthetics

I will consult my stakeholder to ensure that the aesthetics in my program are pleasing and do not take away from the experience.

### Functionality

### Usability

### Health & Safety

I will warn users that they are not the Demigod Maui and as such should not attempt to fish up an island continent.

## Requirements

### Research

#### Maui’s Feats and Legends

According to Maui’s Wikipedia entry, there are a couple of myths about Maui I could do.

The first myth tells the story of Maui’s naming and his family.

The second myth tells of how he fished up Aotearoa. This will be the most important one and what I start with.

The third myth tells of how Maui discovered how to create fire for mankind. He went up to the Mahuika, goddess of fire and volcanoes and requested for fire for his village.

The final myth tells of his death and his quest to claim immortality for mankind. It tells of the goddess of death and Maui’s

<https://teara.govt.nz/en/te-hi-ika-maori-fishing/page-1>

#### Old Adventure Game: Zork

Zork is an old computer text adventure game, where the user plays by entering text commands to complete actions. I’ve played some of this game for research, but the vast amount of commands I can enter is disorientating.

#### Engine Research

IDLE

It’s just smarter to do something I can use, Python is extremely flexible and it can do everything I want.

#### Planning

Gonna use Github’s Kanban board.

Kanban Boards are good because it allows you to easily tell what you’ve done and haven’t done for your program. Trello has a really nice Kanban board that I plan to use.

UPDATE: I’ve found out that GitHub has it’s own Kanban board, so instead im going to use GitHub. This is because it’s more convenient to have all my development tools in one place.

User stories are good to cut down and rationalize the work you need to do, as well as see how important each function really is.

#### Prototype Research

#### Paper Prototype/Wizard of Oz

This prototyping method relies on using digital or physical resources to create slides based on what a program could look like. Ways to do this could be using paper (hence the paper prototype name) or digitally using resources like paint or Photoshop. I’ll be using this with google slides.

#### GitHub

GitHub is the version control software that I will be using to develop my project. GitHub is a very useful software that allows me to effectively control changes that I have made. GitHub is optimized for multiple developers, but on this project I will be working alone. What makes GitHub so useful is the ability to create a clone of my main repository to implement changes and/or bug fixes and if they don’t pan out right I am able to rollback my changes. If the changes work however, I can easily commit them back into the main repository.

### Brainstorm

* Represent the ocean using ASCII text (Similar to table printing)
* Singular Playable Character
* Fishing Combat?
* Upgrade fishing rod upgrade stats?
* Luck-based catch
* More than one level
* Discovering Aoteroa could be the final level?
* Alternatively all the way to Maui’s death
* Goddess of Death cut scene death?
* Difficulties could be done
* Starting fishing rod?
* Turns before hunger deteriotes
* Starting Fish
* Different Tiles
* Represented by different symbols or colour?
* Color.write
* Fish expiry?
* Difficulty Dependent

### Evaluation

*Why did you chose to use the planning tool for the requirement that you did?*

I am using the scrum methodology because the industry uses

*What are the requirements for your project you have derived from this planning?*

### User Stories

Priorities: Crucial Good to Have Side Feature Extravagrant

As a player, I want the fishing to be simple and intuitive yet varied by having a chance based system so that the hunger system isn’t one dimensional.

As a player, I want a hunger system so I can feel a sense of pressure as I play through the game.

As a experienced player, I want a hunger system that is varied with different food so that the hunger system feels intricate.

As a Maori, I want the legend told in this story to be factually accurate so that future generations have the correct idea of my ancestor’s stories.

As a player, I want the world to be visually displayed so that I can easily see where I have or have not been.

As a player, I want a combat system so that I can really feel empowered like the demigod Maui.

As a developer, I want the program to be structured logically so it is easy to understand and improve.

As a learner, I want there to be multiple scenarios so I can learn a lot about Maui’s legend.

As a casual/hard-core player, I want different difficulties so that I can decide whether I want a hard challenge or just want to breeze by Maui’s legend.

As a player, I want to be able to choose which world to go to if I’ve completed the game so I can retry sections I did not understand/appreciate.

As a player, I want there to be different items I can use like weapons or fishing rod so that I can feel a sense of progression.

As a player, I want the ability for Maui to permanently die ending the game so that I can feel a sense of pressure.

As a non-maori speaker, I want there to be a glossary of Maori words used so that I can understand what they mean.

As a player, I want the ability to save my game so I can continue to play after sessions.

As a player, I want varied enemies so that encounters aren’t stale.

As a player, I want different moves and attacks so that encounters feel varied.

### Critical Review Points

My first critical review point should be just after creating a playable version of the game featuring an over world and the ability to move and get to a certain important objective. By this point, I should have a version of the game which allows me to see an ASCII layout of a pre-determined map, a system that allows me to move throughout the map but not go out of bounds.

* Map
* Preprogramed Boundaries
* Preprogramed Content
* Preprogramed Ending Point
* Preprogramed Starting Point
* Movement
* 4 Cardinal Directional Movement
* Prevent from going out of Bounds

My next goal should be to implement a fishing/hunger system. To start off, there won’t be any different types of fishing rods, just a normal one that Maui will start with. Based on the type of terrain that the user is on, they can have the option to fish. If the user is on a land tile they won’t be able to fish. The fishing system should by this point function on a chance based system (50/50 for this version)

* Fishing
* Default Rod
* Starts with Maui
* Terrain
* Allow Fishing On Water
* Disable Fishing on Land
* Catch Rates
* 50/50 At this point
* Fish
* Just a normal “Fish” at this point
* Hunger
* Track Amount of Fish user has
* Eating
* Allow Consumption if user has fish
* Disallow Consumption if user does not have fish.
* Gradually go down with every turn that passes

Afterwards I should aim to create a system that allows the user to find different fishing rods and catch different types of fish (based on terrain and rod). At this point, all the necessary ingredients are needed to be able to complete the first scenario. The first one would be Maui discovering Aotearoa, completed when the user fishes on a specific tile with a special fishing rod that can be found somewhere predetermined.

* Inventory
* Store Fish
* Store Items
* Ability to Equip/De-equip different items

## Development

<https://github.com/KHOWI/legend.maui/commits/master>

### Version 0 – 1

From this version onwards, I will be aiming to create a map that has all the functions of my first review point.

#### v0.1

This is the version where the document is created, but I haven’t done anything other than that so far.

##### Feedback from Maori Stakeholders

Story: I plan to do a story where Maui gets on a boat (may or may not be the South Island) and goes to find Aotearoa. First he needs to find his grandma's jaw, to make a fishing hook that can fish up Aotearoa. The main sections of the game will consist of Ocean Voyage, where he Maui will do some cool cave stuff.

How important is the way that Maui finds his grandma Murirangawhenua's jaw.

Collis: First of all its a waka not a boat you culturally insensitive \*\*\*\*.

Something you can change is that his grandma is in the cave and she gives the jaw to him then.

It's fine to leave his brothers out.

Olivia: Yeah this is fine, there’s so many different variations of the myth that this could be accepted.

Will: Should i do an introduction for Maui, or a powhiri?

Collis: Nah, a powhiri is an actual ceremony with dances and shit. In fact, doing a powhiri in code would be pretty rude. Instead, you should go through his pepeha. If you can't find his pepeha (considering he's a divine deity) you can just run through his lineage. His dad's called Makeatutare. His mum is Taranga and his divine ancester is Tama-nui-te-ra (or Rangi).

Olivia: Doing a pepeha would be good.

#### v0.2

+ Added Map Generator for Stage 1

+ Added Framework for Movement Processing

+ Added Framework for Movement Checker

+ Added Framework for Map Displayer

+ Added Basic Main Command Structure

#### v0.3

+ Movement Processor functions as intended now!

+ Changed the two dimensional lists into one dimensional lists

#### V0.11

##### Feedback from Mr Ny

I’d like there to be a little introduction that explains to the player what they’re doing and what they need to do or a help thing somewhere. The movement is cool, but I’d like there to be the option to type abbreviations such as u, r etc

##### Response

The help module and intro is something that I would program later, currently it is not a high priority and the only people with access to this program would have the presence of a developer next to them to explain. Before my final version release for 1 however, I will make sure help is something that can be achieved. Actually in this version I’ve just finished coding a command processor so that means that I now have the ability for the program to detect whether a player is asking for help.

The abbreviation thing however, is not something that I’d foreseen. I will make sure to code that in. However, currently my keyword detecting system doesn’t play well with letters. If I recall however, Zork did not allow the player to type abbreviations. Further research is required.

#### V0.12

##### Feedback from Chris

Enter a space after “Enter a command”. Make it so I can’t have negative fish. A bigger grid size would make the game harder and a bit longer.

#### V0.13

##### Feedback from Tristan

More content, map size and random things happening I.E AI interactions with player, more chooses and animal attacks. Interactive items on map

Intro: It was captivating, Interesting and gave a feel of adventure for the player to start the game with

Movement System: it worked smoothly and gave the me the player time to think about what my next move would be. It also was easy to understand and to use with a wide amount of codes available for movement purposes

Map Display: The map was on the small side and not captivating for the eye with its use of letters and lack of colour. To improve this, I would suggest making the map larger in either height, length or both. Another idea for improvement would be to introduce a new spectrum of colours that make sense with the environment it is describing.

Hunger: The hunger aspect was a little but pointless. The player starts with too much food for the hunger mechanic to make sense. By the time the goal of the game was reached I only had to eat twice leaving me an extra 1 piece of food left, I also took the longest rout in the game for perspective as to how frequently the player needs to eat. A way to fix this would either involve making the map larger, starting with no food and picking it up in the game, lesson the time between eating, or to start with less food at the start of the game.

#### Response

Questlines and content is something that I plan to implement at a later date, right now I’m more focused on getting my key mechanics down. Your ideas for random events are actually quite interesting however and contain events that I haven’t thought of. I will try to implement some of your events in future . The map color spectrum is something I haven’t thought of, I think ill make a custom python color scheme for my project so that map stuff is more clear. I plan to develop fishing right now.

##### Fishing Mechanic

In this version I try to implement a fishing mechanic. However, I have 2 main decisions.

Should fishing involve the player in a minigame of sorts, or should it just be chance based?

Should the player be able to fish multiple times per turn?

Bohan: I think that a minigame would be too tedious because fishing and hunger are core mechanics and implementing an exercise is too tedious. Chance based is good. I also think that the amount of times a player can fish per turn should be limited to 2. I think the chance should be 30-40. I think that the hunger should affect fishing chance. For example, if the player is hungry they should be able to fish less, but have a higher chance of getting a fish. I also think that hunger shouldn’t kill you instantly and instead be a chance

Isaac: I think that it should be a chance based system would be better with the fishing system. You should only be able to fish 5 times in a row and then you have to move again. It should be a 30% chance of catching a fish. I reckon you should only be able to move three places before having to eat again. If you move to many time while hungry, you should die.

Rowan: I believe the fishing should be balanced not through a minigame but through something risk/reward based, as right now you can fish until you have 20 fish on the spot and then keep going, so maybe keep it chance based but introduce some sort of penalty for staying on the spot or have enemies approach or something like that? The hunger is fair though. The player should be able to fish once per turn, maybe even less if in certain circumstances, but keep all other abilities.

Mr Ny: I think that the fishing should be chance based and that the current probability at 50% is just fine, I think that not only should the player be able to fish once per turn, it should take up the entire turn, that way there is a cost to fishing. When you do implement the fishhook of maui, the player should be guaranteed to catch a fish or something.

Based on Mr Ny and Bohan’s feedback, I have reduced the amount of turns you can fish to 1, and in addition it takes up a turn. The common consensus is a chance based system is way better than a minigame. I will choose to follow the feedback of these stakeholders as it is unanimous.

##### Mr Ny Feedback

First Up, there should be something that tells the user to enter help at the start for help. The intro is cool, although a macro on the ‘a’ in Maui for the intro display would be good. I think the movement is cool, everything is sweet. I think that the player shouldn’t be able to see where everything is however, and they should try to locate the ends on their own. A fog of war might be good

Response: ooooo a fog of war mechanic would be great, and it would tie in perfectly with my idea of implementing text that tells you where your whereabouts are. I’ll try to get the macron in maui soon although that may take a while.

### Version 1 – 2

#### Critical Review Point

Since I’ve accomplished everything I wanted to in my first review point, I’ll go over only my second review point which is as follows:

* Fishing
* Default Rod
* Starts with Maui
* Terrain
* Allow Fishing On Water
* Disable Fishing on Land
* Catch Rates
* 50/50 At this point
* Fish
* Just a normal “Fish” at this point
* Hunger
* Track Amount of Fish user has
* Eating
* Allow Consumption if user has fish
* Disallow Consumption if user does not have fish.
* Gradually go down with every turn that passes

Out of these I’ve finished terrain checking on fishing, catch rates and fish in inventory. I haven’t done the default rod start yet, but that’s not important in hindsight. For hunger, I’ve completed fish tracking and eating. The hunger value I decided to end at was 6 so the user has 5 turns to do whatever. My next review point is:

* Inventory
* Store Fish
* Store Items
* Ability to Equip/De-equip different items

I think I’ll change this to:

* Inventory
* Different Types of Fish
* Store Items
* Ability to Equip/De-equip different items
* Code in Quest Items
* Code in a small crafting system of sorts.
* Storyline
* Implement a bigger map and story
* Let the user actually find the grandma’s jaw to craft the fishhook of Maui
* Possibly implement a cave level
* Map Generation Engine
* Fog of War Maybe
* More aesthetic maybe
* Get rid of map maybe
* Text to show where you’re around

I’ll focus on the actual game since the mechanics have at this point basically been completely done. The key focus of this version is storyline and map. I think that I’m going to completely cut out weapons and fighting, since I feel like it would detract from the overall experience and just feel like I’m throwing combat in there for the sake of it. Instead, im going to take the feedback of one of my stakeholders and just make random events where a monster may/may not appear and instead of killing you or fighting you just rob your fish.

#### V1.01

##### Feedback from Viktor

Viktor: at the end of tutorial, instead of jumping directly to the actual game it would be nice to have a "transition"; maybe a messsage saying "Well done -- you have completed the tutorial -- now is the time for the game!"

Viktor: the move is easy to follow by typing the whole word or part of it, eg "move up", "up" or "u".

#### V1.02

##### Feedback from Maori Stakeholders

Intro:

A new dawn breaks the crest of the sea...

The mighty sea beckons, and from the depths a new hero arises...

Now is the time of man, and your people need a land in which to thrive...

Awaken, and discover Aotearoa as you begin...

The Legend of Maui!

Collis: Yeah this is fine.

Olivia: Nothing wrong here

Maui's Intro:

Haere Mai Maui-tikitiki-a-Taranga, Maui-potiki, divine descendant of Tama-nui-te-ra.

Your future deeds are great and many, and now is the time to claim the title of Maui-te-whare-kino.

Embark now, and discover the land of the long white cloud.

Collis: Since he doesn’t have a pepeha this is fine. There's no other way to introduce him, and since hes a divine dude he gets a title. It's fine to say he gets his house of trouble title.

Olivia: Oh wow this is actually really good. Especially that first line, where you go through his lineage, that’s good. There’s nothing wrong here.

Fishing Double Fish: Wow! You managed to catch 2 fish with one hook!

Tumatauenga/Tangaroa must be blessing you. You give thanks.

Who do i credit?

Collis: Say "Your karakia must have worked." instead. It's a Maori prayer.

But you do it before you fish, sorta like you do a karakia and then you get 2 fish, not the other way around.

To get around this you could make him do it before he Fishes. Or maybe show that he does it beforehand.

Olivia: Normally it depends which god you want to thank. Personally, I’d thank Tangaroa, since you’re taking from him, but if you want you could do Tumatauenga or both. Actually, It might be better to only pick one god. I’m gonna say Tangaroa but there’s no wrong option here.

William: So in this Maui can die. Is this cool? What do I do instead.

Collis: This is a big no-no. You can't change his death, it's really significant. Instead, try and avoid

saying he dies.

William: So I have a hunger system where Maui can starve

Collis: Just say he gives up/fails and goes home. Don’t say he dies.

Olivia: Mhm I agree just say he gets called home. Or, since you know theres a Maori myth where maui slows the sun, you can just say that Maui’s time ran out and that way you can transition into that myth.

##### Feedback from Collis

The Map elements are a bit too tiny to see, they should be made bigger to be more clear and give more sense of movement. The introduction is pretty epic and sets a nice tone for the rest of the game.

The tutorial is very clear and literally tells you what to do which is good. I think we should b told what

we are first (x).

The movement is intuitive. In the tutorial, make it so that you're forced to eat and fish.

#### V1.03

##### Feedback from Brianna

The tutorial is good and is super streamlined for the user. Your program is super flexible and robust, there’s a lot of freedom in what you can enter to trigger commands. I think that the user needs to be better informed in exactly what they can/can’t type however, since the tutorial only said type “Move Right” and I had to guess to type right

##### Feedback from Chris

The program has improved a lot since the last time I played it. The tutorial is good in telling the user what to do. I think that telling the user they can type abbreviations like e and f is good tho.

##### Response

I’ll be adding a prompt for the user to type “help” for more advanced knowledge.

#### Review Point

At this point I’m questioning the necessity of some of my development goals.

* Inventory
* ~~Different Types of Fish~~
* Store Items
* Ability to Equip/De-equip different items
* Code in Quest Items
* Code in a small ~~crafting~~ shop system of sorts.
* Code in crafting at the store for fish
* Storyline
* Implement a bigger map and story
* Let the user actually find the grandma’s jaw to craft the fishhook of Maui
* ~~Possibly~~ implement a cave level
* Map Generation Engine
* Fog of War Maybe
* More aesthetic maybe
* ~~Get rid of map maybe~~
* Text to show where you’re around
* Random Events
* Not too frequent as to not detract from user experience
* Will be elaborated on more in the future just an idea for now

As we can see, I’ve decided to cut out and solidify some of my goals. I’ve decided to scrap the idea of there being different type of fish, because development side implementing many kinds of fish is a pain. On the user experience side, selecting which type of fish to eat would also clunky and annoying, and I’ve gotten feedback from Bohan Zhang and Luke Piper to scrap the idea. I’ve decided to scrap the idea of crafting, and I will make it so that the grandma just hands you a completed rod. This is because I feel like crafting isn’t super intuitive, and the necessity of implementing side quests to collect materials feels like I’m purposefully stretching the game for user while my program is already time consuming enough. I’ve decided that a cave will be added, and I’ve started development on this task as of right now. I had some feedback that removing the map entirely and letting the user try and fumble their way around with text could be good, as to stay faithful to the original zork games, but I don’t think that this is suitable for a seafaring game.

As for random events, I’m strongly considering implementing some but this isn’t of high priority and I’m happy to just let it sit on my Kanban board for a bit.

#### V1.04

##### Luke Piper:

I got slightly confused about what was sea and what was cave, you could differentiate them with different colours, maybe there could be a feature of different parts of the sea have different chances of fish catches, overall great, probably should of done the tutorials to be honest. The cave was neat and added a new feel to the game.

##### Brook Thomson

I think it would be good if you explained how the caves work in the tutorial. The largeness of the cave did make the game quite a bit longer, but it was also a more challenging addition since you couldn’t fish through it, and if it wasn’t that size the not being able to fish wouldn’t matter as much. Other than that, I think it’s a really cool game, I like how you can use key words or just the first letter for movement and action, and the random aspect of how many fish you can get.

#### V1.05

##### Intro Feedback:

Isaac Sturzaker: I really like how the letters print out letter by letter. It really adds to the game effect instead of just a program. Just to make it look a bit smoother, I think you should add a slight delay between the introduction and printing out the game. This will just make it look smoother and allow the user to finish reading the introduction.

Response: I will tweak the delays, and add a prompt before it starts the game.

Switched the delays to 1.5 before Maui proclaims his greatness, then 1 everytime afterwards. Before Maui says that it’s his legend, theres a 2 second delay before it prints.

Isaac Sturzaker: This is much better now as it gives the user longer time to read. I also think its more realistic that is has a enter to begin

##### Mr Ny

Wow, this is exactly what I was looking for. The only thing I can think of for you to change is to maybe change the character’s x to a different color.

Response: I’ve changed it from using the KEYWORD color in the IDLE color scheme to using a different highlighted color.