

THE MIKU MEGA DOC

Certified Miku fans



Figure 1: Hatsune Miku (Fandom *Hatsune Miku*)

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Introduction

The primary goal of the team Certified Miku Fans is to create a Zelda-like game starring Vocaloid's lead, Hatsune Miku. The team consists of Wilson Lin, Charlie Cavallaro, Vivian Qian, Timothy Blair, Noelle Lin, and Songyu Ye. The document will highlight the group's struggles and successes throughout the design and coding process, demonstrating the progression of the team's video game design capabilities and showcasing the group's ability to collaborate effectively, despite being an impromptu assembly of members.

Who is Hatsune Miku?

https://en.wikipedia.org/wiki/Hatsune_Miku

(Insert Hatsune Miku here)

// In text citation

(Who is Hatsune Miku?)

Meeting Log

9/10/2024 - Sprint 2 Division of Responsibilities discussion.

9/11/2024 (In class) - Sprint 2 sprite and state discussion.

*Note from this point on In Class meetings are not recorded but assume they happened.

9/13/2024 - Recurring general discussion meeting.

9/23/25 - Enemy Sub-Team meeting to discuss and refine enemy functionality

9/23/2024- Grader Meeting 1 with Natalie

9/26/2024 - Grader Meeting 2 with Natalie

Sprint 2

Division of Responsibilities

- Player control (1 2 3) - Wilson and Charlie
 - Implement a Command for each movement when key is clicked
 - Implement a Command for each movement when key is held down
 - Implement a Command for each movement when key is released
- Blocks / Obstacle controls - TJ
 - Blocks appear on screen in a set position.
 - Can use T and Y to cycle through blocks.

- Item controls - Vivian
 - Keyboard and ICommand structure
 - Helped with Miku's early movement animation
 - Item interface and commands (cycling through items/summoning them)
 - Sprite Work (Photoshopped out all backgrounds and drew custom sprites)
- Enemy controls (2 commands, cycle enemies) - Songyu and Noelle
 - Finding + formatting sprites
 - Making the enemies move on their own.
 -
- Miku (Currently Link) controls (moving and throwing) - Wilson and Charlie
 - Miku moving and facing different directions
 - Attacking and moving
- Lead version control specialist (Github) - Charles Cavallaro
- Lead documenter - Wilson Lin

Alternate Separations:

Research:

- How to consolidate sprite classes especially animated or moving vs not animated.
- Later command patterns + other useful content covered later in the class.

By 9/14:

Link movement: Have movement working with as many abilities working.

Interface: Have a rough interface ready for use.

Other controls: Complete by 9/14

Blocks / Items: Have a single block or item with the cycling (Even if not all of them)

Enemies: Have at least one enemy ready with movement.

[Interface Discussion](#)

Folders: All Interfaces in 1 folder, sort by interface implemented, all commands and controllers grouped.

[Sprint 2 Code Review Notes](#)

[Sprint 2 Reflection](#)

Features

All of the features for this sprint were met, however there were drawbacks faced along the way. More documentation below will further explain the challenges.

Features included

1. WASD movement and direction change.
2. Miku's sword stab (In this sprint, we have it bound along with the other projectiles in the number keys)
3. E causes Miku to be damaged.
4. T and Y cycle between all the blocks showcasing the building blocks used to build the world.
5. U and I showcase all the items in the game and cycle through all of them.
6. O and P display the enemies with attack patterns and movement as they do in the game.
7. Q quits the game.

Features not included

1. R to reset the game.

Summary

Sprint 2 showcased our individual commitment to completing assigned tasks; however, the group overlooked crucial steps of the design process. The most critical error during the DESIGN process was skipping the discussion phase. Our team, Certified Miku Fans, had forgotten to discuss and explore strategies, the team had eagerly jumped directly into implementation. This misstep resulted in a cascade of issues that were addressed with temporary band-aid fixes. A new foundation is currently being laid. While valuable lessons were learned, these band-aid fixes, although not born of ignorance to design patterns, were intended to be used as stepping stones to test features, however if they were removed it would cause the entire project to collapse entirely.

Drawbacks

- Flawed foundational design.
- Poor planning.
- Limited discussion between different task holders. (Causing varied ways of implementation)
- Extensive refactoring required.

Results

The results of the project were neutral. Although a weak code architecture was created, the project has high functionality. Overall the group had key takeaways that will be transitioned into the next sprints.

References

Hatsune Miku. Fandom, https://vocaloid.fandom.com/wiki/Hatsune_Miku. Accessed Sept. 2024.

“Who Is Hatsune Miku?” *About HATSUNE MIKU | CRYPTON FUTURE MEDIA*,
ec.crypton.co.jp/pages/prod/virtualsinger/cv01_us. Accessed Sept. 2024.