

Final Project Report

Created 2023.11.27

Presentation:

https://utoronto-my.sharepoint.com/personal/simonj_hunter_mail_utoronto_ca/_layouts/15/stream.aspx?id=%2Fpersonal%2Fsimonj%5Fhunter%5Fmail%5Futoronto%5Fca%2FDocuments%2FSunset%20Abyss%20Presentation%2Emp4&referrer=StreamWebApp%2EWeb&referrerScenario=AddressBarCopied%2Eview

Sunset Abyss

Stephan Scilenyj

Shunqi Wang

Simon Hunter

Ryan Yao

SECTION 1: TABLE OF CONTENTS

Section 1: Table of Contents

Section 2: Report Summary

- Scope of Project
- The “Why?” to our Project

Section 3: Sprint Overviews / Process Documentation

- Sprint 1: Foundational Tasks
 - 1.1 Sprint Overview
 - 1.2 Stories Selected for this Sprint
 - 1.3 Team Capacity
 - 1.4 Participants
 - 1.5 Tasks Completed
 - 1.6 Product Backlog
 - 1.7 Sprint Code Reviews
 - 1.8 Sprint Retrospective
- Sprint 2: Main Components
- Sprint 3: Finishing Touches
- Sprint 4: Testing, Debugging, and Preparations

Section 4: Summary

- Limitations
- Accomplishments

SECTION 2: REPORT SUMMARY

The Scope of our Project:

Our goal is to add features to an existing game which enhances gameplay while also promoting accessibility. We have stuck to the original project we were assigned in assignment 2 in order to lay a concrete foundation to build these features on. We have achieved our objective by implementing multiple game enhancing features such as a mini-map and an entirely new combat system while also modifying current aspects of the game to appear more accessible to people with hearing and/or visual impairments. These accessible features include but are not limited to borders around selected buttons, a text to speech module, sound effects, etc...

The “Why?” for our project:

We believe in the right for everyone to play. Many projects cater to the able bodied audience by leaving out crucial accessibility options in their games. We pondered and asked the question why not develop for both? Our game can be fully finished and experienced to the fullest no matter the player. This basic but important aspect about our game opens up the potential audience to an even broader range of video game players.

We also strongly believe that a influx in the development of video games with robust accessibility feature will set a precedent, urging major development studios to embrace this trend as well. Larger studios will foster a more inclusive and considerate approach for video game / software design and creating a more welcoming environment for people with accessibility needs.

Sprint 1 (Nov 10th - Nov 17th):

1.1 Sprint Overview:

Our goal for this sprint was to lay a foundation for our following sprints.

This included implementing our mini-map design, the sound emitter controller, the entire player health system, and the Text to Speech module.

1.2 Stories Selected for this Sprint:

Simon:

- Mini - Map (ID 1.3)
- Changes:
 - Instead of the color of the buttons changing color based on the available directions, the button will now be hidden if the corresponding direction is unavailable.

Stephan:

- Sound Emitter (ID 1.1)
- Changes:
 - Added VolumeManager to allow for fading sound in and out
 - Added the ability to loop sounds
 - Added the ability to make typeless sounds
 - Added basic features such as muting, volume, etc
 - Revamped organization of SoundEmitter

Shunqi:

- Health System (ID 1.5, 2.2, and 2.3)
- Changes:
 - Add a maximum health(100) to the player.

Ryan:

- ALT Button to Mouse Mode (ID 2.7)
- Changes:
 - The playback of the TTS has a default english voice.
 - If the user decides to change the voice, it is doable through accessibility settings.
 - Drop Shadow effect in place as the mouse is hovered over the button.

1.3 Team Capacity:

Expectations:

- Mini - Map:
 - We expect we could finish the mini - map by Thursday November 16th
- Sound Emitter:
 - We expect we could complete the sound emitter by Friday November 17th
- Health System:
 - We expect to finish the health system by Sunday November 19th
- ALT (Mouse to Keyboard Toggle):
 - We expect to finish the ALT mode by Sunday November 19th

1.4 Participants:

Simon:

- Responsibilities and Tasks:
 - Project Management
 - Plan out all 4 sprints and assign people tasks per sprint
 - Create the Final Report
 - Organise planned meetings
 - Complete the Mini - Map feature
 - Implement the UML design
 - Make it update upon entrance per room
 - Meeting and Report documentation
 - Take notes at end of sprint
 - Commenting and merging any new merge requests

Stephan:

- Responsibilities and Tasks:
 - Help manage gitlab
 - Complete the Sound Emitter
 - Implement sound effects
 - Complete all components related to the Sound Emitter
 - Commenting and merging any new merge requests

Shunqi:

- Responsibilities and Tasks:
 - Completing the user story assigned
 - Add the text that displays the player's current health into the UI system.
 - Generate health potions and make them accessible for players to drink.
 - Commenting and merging any new merge requests

Ryan:

- Responsibilities and Tasks:
 - Complete the Text - to - Speech
 - Display all the menu options in the menu
 - Add the button options in the menu
 - Ensure that the buttons play a speech when hovered over
 - Redirect to the game if clicked on 'Play', otherwise other pages based on their functionality
 - Mouse is visible and scrollable
 - In Accessibility Settings, allow volume, rate and the voice to be changed at the user's will.
 - Commenting and merging any new merge requests

1.5 Tasks Completed:

Completed:

- Mini - Map feature
- Sound Emitter
- Entire Player Health System
- ALT (Button to Mouse Mode)

All planned user stories have been completed this sprint!

1.6 Sprint 1 Product Backlog;

- Mini - Map
- Highlight over Button
- Sound Emitter
- KeyBinds
- Fighting System (ID 4.5)
- Health System:
- Fighting System (ID 1.7 and ID 2.4)
- Fighting System (ID 3.4)
- ALT (Mouse to Button Mode)
- TTS (Text - to - Speech)
- Fighting System (ID 1.3)
- Dynamic Music

1.7 Sprint 1 Code Reviews:

Story Reviewed	Name of Reviewer	Pull Request Link
[DEV-1.1] Init Sound Management System	Simon	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/10
[DEV-1.1] Init Sound Management System	Shunqi	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/10
[DEV-1.3] Finished MiniMap!	Stephan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/9
[DEV-1.3] Finished MiniMap!	Shunqi	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/9
[DEV-1.3] Finished MiniMap!	Ryan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/9
[DEV-1.9] Current code of the alt side of things....	Simon	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/6
[DEV-1.5] Health system finished.	Stephan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/16

1.8 Sprint 1 Retrospective:

The participants in the meeting:

- Simon
- Stephan
- Shunqi
- Ryan

Any unfinished tasks:

- Finish writing the new story/game

A summary of practices that went well this sprint and should be continued:

- Planning:
 - We coordinated and delegated tasks to each person per week long sprint. A doc was created which showed each sprint and organised by person and their tasks due by the end of that sprint.
- Collaboration:
 - Each of us actively participated in a group chat that was highly active throughout this sprint. When questions were asked, multiple answers were given. This was a very healthy group dynamic
- Organised:
 - Everyone was on top of their given tasks throughout the sprint. A group meeting was made halfway through the week to discuss any issues anyone had and how far everyone was with their tasks.

A summary of new or revised practices to include moving forward:

- Use of GIT
 - We realised that we were updating our Group-14 main directly. We realised that this was a poor choice since there was no room to backtrack if we messed up badly, so we created 4 new forks for us to independently work on.
 - We realised that we were uploading directly to our Group-14 main repository before sending a merge request. We revised our approach to send in a merge request before actually merging into the Group-14 main.

A summary of any bad practices that will not be repeated moving forward:

- Merges
 - We did not merge our files early enough into the sprint. This resulted in our group not working on the same version and caused many conflicts when re-merging our commits.

Your team's best/worst experience during this sprint:

- Best:
 - Once all of our tasks were completed and merged into our repository, it was incredibly satisfying to see all of our user stories and features in a working state.
- Worst:
 - The amount of de-bugging and conflicts due to us working on older versions of the project led to a lot of frustration and tense meetings between us.

Sprint 2 (Nov 17th - Nov 24th):

2.1 Sprint Overview:

Our goal for this sprint was to start developing the more noticeable and interactable features about our game. These include the borders around buttons once they are highlighted, the keybinds, the foundational components of the fighting system, and the text - to - speech functions.

2.2 Stories Selected for this Sprint:

Simon:

- Highlight / Border over Button (ID 1.4)
- Changes:
 - Instead of having the button highlighted and lifted, the button now simply is highlighted white to contrast the background.

Stephan:

- Keybinds (ID 1.2)
- Changes:
 - Added VolumeManager to allow for fading sound in and out
 - Added the ability to loop sounds
 - Added the ability to make typeless sounds
 - Added basic features such as muting, volume, etc
 - Revamped organization of SoundEmitter

Shunqi:

- Fighting System (ID 1.7)
- Changes (ID 1.7):
 - The enemy now created will have different types of attacks.

Ryan:

- Text - to - Speech (ID 1.9)
- Changes:
 - No changes made to the user story

2.3 Team Capacity:

Expectations:

- Highlight over Button:
 - We expect to finish the highlight button feature by Wednesday November 22nd
- KeyBinds:
 - We expect to finish all the keybinds and their functionality working by Friday November 24th
- Fighting System (ID 1.7):
 - We expect to finish the foundational component of the fighting system by Sunday November 26th
- TTS (Text - to - Speech):
 - We expect to finish the text to speech feature by Friday November 24th

2.4 Participants:

Simon:

- Responsibilities and Tasks:
 - Project Management
 - Organise planned meetings
 - Organise tasks given to group members
 - Complete the Highlight button feature
 - replace all buttons with a direction/highlight button
 - highlight should be enabled with either mouse activation or key activation
 - Complete the new story/game
 - Create new rooms and their connections to each other
 - create 4 new fights
 - make images per room
 - make new objects for the game
 - Meeting and Report documentation
 - Take notes during end of sprint meeting
 - Commenting and merging any new merge requests

Stephan:

- Responsibilities and Tasks:
 - Help manage gitlab
 - Create a new development branch within the group-14 repository
 - Complete the Keybinds feature
 - Create methods for all keybinds
 - Bind the WASD and arrow keys to movement
 - Commenting and merging any new merge requests

Shunqi:

- Responsibilities and Tasks:
 - Create the foundation of the fighting system
 - Create a method to generate enemies and place them into specific rooms
 - Replace the room description with the description of the enemy
 - Commenting and merging any new merge requests

Ryan:

- Responsibilities and Tasks:
 - Complete the ALT (Button to Mouse Mode):
 - Ensure that when alt is pressed, it toggles modes (from keybind to mouse)
 - Ensure that keybinds are working after a toggling occurs

2.5 Tasks Completed:

Completed:

- The new story/game was fully complete

No user stories/features were fully finished during this sprint

2.6 Sprint 2 Product Backlog:

- Highlight over Button (ID 1.4)
- KeyBinds (ID 1.2)
- Fighting System (ID 4.5)
- Fighting System (ID 1.7 and ID 2.4)
- Fighting System (ID 3.4)
- TTS (Text - to - Speech)
- Fighting System (ID 1.3)

2.7 Sprint 2 Code Reviews:

Story Reviewed	Name of Reviewer	Pull Request Link
[DEV-1.2] Keybinds	Simon	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/12
[DEV-1.2] Keybinds	Ryan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/12
[DEV-2.7] Menu Options	Simon	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/19
[DEV-2.7] Menu Options	Stephan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/19
[DEV-1.4] Very Big Merge Request (Highlight Button)	Stephan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/17
[DEV-1.4] Very Big Merge Request (Highlight Button)	Shunqi	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/17

2.8 Sprint 2 Retrospective:

The participants in the meeting:

- Simon
- Stephan
- Shunqi
- Ryan

Any unfinished tasks:

- Highlight over Button
- KeyBinds
- Fighting System (ID 1.7 and ID 2.4)
- TTS (Text - to - Speech)

A summary of practices that went well this sprint and should be continued:

- Responsiveness:
 - Although this sprint was incredibly rocky, we were incredibly talkative during it. We held multiple meetings to find out if there were issues, who needed help, and who could help. This may have saved us since near the end of the sprint, we were able to get all sprint to a very close to finished product due to our allocation of resources.

A summary of new or revised practices to include moving forward:

- Development Branch
 - During the previous sprint, our group would merge into the main repository for our project. We later learned that this was a very poor choice in the event an issue occurred in main and that a change was irreversible. This sparked the idea that we would merge into a separate development branch when developing our features, and then once our finished product was complete, we would merge into the main branch.

A summary of any bad practices that will not be repeated moving forward:

- Merges
 - Some of use were working on the incorrect version of the project. This meant that when merging, there were duplicates of every base file such as AdventureGameView and such. Doing this created many conflicts and hours of stressful debugging. We have now fixed this and are all operating on the same project.

Your team's best/worst experience during this sprint:

- Best:
 - When our environmental issues were fixed, it was incredibly relieving knowing that our entire project was not broken. Reading the new story and looking at all of the new room/item images also gave us a sense of the new game we were working around.
- Worst:
 - De-bugging and trying to reverse merges to fix our environmental issues with the repository was incredibly stressful. It took all members many hours straight late at night to fix this issue. All of that time used to essentially be no where closer to finishing the unfinished tasks.

Sprint 3 (Nov 24th - Dec 1st):

3.1 Sprint Overview:

Our goal for this sprint was to finalize the combat system of our project. This includes the completion of user stories ID 4.5, 3.,4, and 1.3. These user stories both make the the combat system more accessible, and makes the combat system functional and ready for submission. Due to certain circumstances, this goal has shifted to also include the outstanding features from sprint 2.

3.2 Stories Selected for this Sprint:

Simon:

- Highlight / Border over Button (ID 1.4)
- Changes:
 - Instead of having the button highlighted and lifted, the button now simply is highlighted white to contrast the background.

Stephan:

- Keybinds (ID 1.2)
- Changes:
 - Added VolumeManager to allow for fading sound in and out
 - Added the ability to loop sounds
 - Added the ability to make typeless sounds
 - Added basic features such as muting, volume, etc
 - Revamped organization of SoundEmitter
- Fighting System Keybinds (ID 4.5)
- Changes:
 - TBD
 - Our group has decided not to create a separate game and will just stick to creating the existing game accessible

Shunqi:

- Fighting System (ID 1.7)
- Changes (ID 1.7):
 - The enemy now created will have different types of attacks
- Battle Manager (ID 2.4)
- Changes:
 - During the battle, all the objects in the room are inaccessible for the player to take.
 - The only object player can access in his inventory is health potion.

Ryan:

- Text - to - Speech (ID 1.9)
- Changes:
 - Now the menu has the ability to redirect the user to different pages based on the button clicked
- Fighting System (ID 1.3)
- Changes:
 - No changes to the user story

3.3 Team Capacity:

Expectations:

- Highlight over Button:
 - We expect to finish the highlight button feature by Tuesday November 28th
- KeyBinds:
 - We expect to finish all the keybinds by Tuesday November 28th
- Fighting System (ID 4.5):
 - We expect to complete this feature of the fighting system by Saturday December 1st
- Fighting System (ID 1.7 and ID 2.4):
 - We expect to finish the foundational components of the fighting system by Wednesday 29th
- Fighting System (ID 3.4):
 - We expect this component of the fighting system by Friday December 1st
- TTS (Text - to - Speech):
 - We expect to finish the text to speech feature by Monday November 27th
- Fighting System (ID 1.3)
 - We expect to finish this feature of the fighting system by Saturday December 2nd

3.4 Participants:

Simon:

- Responsibilities and Tasks:
 - Project Management
 - Managing member tasks
 - Managing new meeting format
 - Complete the Highlight button feature
 - When button is selected with key, enable highlight
 - Provide support to any outstanding features
 - Fix the story/game room.txt formatting
 - Find an error button sound effect
 - Meeting and Report documentation
 - Record notes during end of sprint meeting
 - Finish the rough copy of the Final Report
 - Commenting and merging any new merge requests

Shunqi:

- Responsibilities and Tasks:
 - Fully complete the fighting system
 - Finish the battle system.
 - During battle, add two buttons into UI : fight and retreat
 - Manage the turn. Turn after the player is the enemy's turn and turn after the enemy is the player's turn.
 - End battle if the player chooses to retreat in his turn.
 - End battle if either player or enemy dead.
 - Commenting and merging any new merge requests

Stephan:

- Responsibilities and Tasks:
 - Help manage gitlab
 - Complete the Keybinds feature
 - Implement all remaining sound effects
 - Bind all remaining keybinds
 - Commenting and merging any new merge requests

Ryan:

- Responsibilities and Tasks:
 - Commit changes and push them into the local branch
 - Ensure that the overall layout of the Main Menu is fine,
 - all the buttons in the right place
 - Redirect user to different pages depending on which button is clicked
 - Manage merge requests associated with my task.

3.5 Tasks Completed:

Completed:

- Highlight over Button (ID 1.4):
- KeyBinds (ID 1.1):
- Fighting System (ID 4.5):
- Fighting System (ID 1.7 and ID 2.4):
- Fighting System (ID 3.4):
- TTS (Text - to - Speech):
- Fighting System (ID 1.3)
- Story rooms.txt formatted properly
- All sound effects and music states implemented

All outstanding and current features were completed!

3.6 Sprint 3 Product Backlog:

- Highlight over Button
- KeyBinds
- Fighting System (ID 4.5)
- Fighting System (ID 1.7 and ID 2.4)
- Fighting System (ID 3.4)
- TTS (Text - to - Speech)
- Fighting System (ID 1.3)

3.7 Sprint 3 Code Reviews:

Story Reviewed	Name of Reviewer	Pull Request Link
[DEV 2.4] Finish the fighting system	Simon	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/22
[DEV 2.4] Finish the fighting system	Stephan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/22
[DEV 2.4] Finish the fighting system	Ryan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/22
[DEV 1.3] Fixed minimap label	Shunqi	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/18
[DEV 1.3] Fixed minimap label	Stephan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/18

3.8 Sprint 3 Retrospective:

The participants in the meeting:

- Simon
- Stephan
- Shunqi
- Ryan

Any unfinished tasks:

- Finished all tasks this sprint!

A summary of practices that went well this sprint and should be continued:

- Time Management:
 - Our group knew at the beginning of the week that we had very little time to complete both our outstanding tasks and the tasks that we had planned. We held a meeting before the sprint started and created a strict schedule for the week. This had an incredibly positive impact on our work ethic and our feature output greatly increased in quality and speed.
 - Our group held short, daily meetings to figure out exactly who/what needed help. These meetings lasted a matter of minutes but were greatly effective. This sprint structure helped contribute to our increase in speed and quality of our feature output.
- Organised:
 - We were able to regroup and organise all of our tasks for the week incredibly well. Everyone knew exactly what they were supposed to do and when it was due. This organisation helped everyone identify which of their tasks had top priority.

- This organisation also helped the members who needed support to quickly identify what they needed help with and who to assign it to. They were able to do this due to the fact that everyone knew what everyone had due.

A summary of new or revised practices to include moving forward:

- Meeting Format
 - We altered the format in which we would conduct meetings. Although meetings had talking points, they had very little structure. This led to some meetings being useless since some of the points were either brushed over or not covered at all. Thus during this sprint, we made sure to have a clear and strict structure to each of our meetings in order to extensively cover each of our points.

A summary of any bad practices that will not be repeated moving forward:

- Rushing
 - We did not initially plan to have this many tasks to complete in our last week long sprint. This caused many of us to rush our features that we needed to implement, causing bugs, conflicts, and even missed components.

Your team's best/worst experience during this sprint:

- Best:
 - Working together on the project and finally seeing results was incredibly exciting for all of us. We had completed most of our tasks and now had a shippable product we could submit.
- Worst:
 - Due to our rushing and stress, a lot of features had to get revised and rebuilt. Along with the mess our repository had become, it was incredibly stressful cleaning everything up before the end of the sprint.

Sprint 4 (Dec 1st - Dec 5th):

4.1 Sprint Overview:

Our goal for this final sprint was to finalise all changes, test all of our implemented features rigorously, and prepare for when we present our project. This sprint was much lighter in comparison to the last 3 due to the minimal amount of work left.

4.2 Stories Selected for this Sprint:

No user stories were chosen in this sprint.

4.3 Team Capacity:

Expectations:

- We expect to be finished testing by Saturday December 2nd
- We expect to finish writing our script for our presentation by Sunday December 3rd
- We expect to finish finalizing out git repository by Tuesday December 5th
- We expect to finish recording our presentation by Monday December 4th
- We expect to finish the Final Report by Tuesday December 4th

4.4 Participants:

Simon:

- Responsibilities and Tasks:
 - Finish the Final Report
 - Review and revise the rough copy of report
 - Record the presentation through a zoom meeting
 - Submit the report along with the recording
 - Project Management
 - Create the structure for script for presentation
 - Fill out my part for the script
 - Create schedule for last organized with tasks
 - Assign tasks to everyone
 - Testing
 - Test all features implemented this far in individually
 - Complete the game in every possible way
 - Find test cases that fail

Stephan:

- Responsibilities and Tasks:
 - Gitlab Management
 - merger the developer branch into our master repository in a shippable state
 - Check for any conflicts when merge branches
 - Clean the master repository by deleting any un-needed files/folders
 - Script Writing
 - Complete assigned part in script

Shunqi:

- Responsibilities and Tasks:
 - Script Writing
 - Complete assigned part in script
 - Testing
 - In depth testing the fighting game feature/user stories
 - Provide support in helping fix bugs related to fighting system

Ryan:

- Responsibilities and Tasks:
 - Script Writing
 - Complete assigned part in script

4.5 Tasks Completed:

Completed:

- Final revision of the Final Report
- Script fully planned and written
- Project presentation fully recorded
- Finished product merged into master repository
- Cleaned master repository
- Testing and bug fixes

4.6 Sprint 4 Product Backlog:

- Final Report
- Presentation Recording
- Cleaned up main branch

4.7 Sprint 4 Code Reviews:

Story Reviewed	Name of Reviewer	Pull Request Link
[DEV 1.2] Keybind Polish	Shunqi	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/23
[DEV 1.2] Keybind Polish	Simon	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/24
[DEV 1.2] Keybind Final	Shunqi	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/23
[DEV 2.7] TTSPProvider Interface.....	Shunqi	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/25
Release V#1	Stephan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/26
Release V#1	Ryan	https://mcsscm.utm.utoronto.ca/csc207_20239/group_14/-/merge_requests/26

4.8 Sprint 4 Retrospective:

The participants in the meeting:

- Simon
- Stephan
- Shunqi
- Ryan

Any unfinished tasks:

- No unfinished tasks!

A summary of practices that went well this sprint and should be continued:

- Communication:
 - Our group communication during this sprint was exceptional. This was due to an altered way of us communicating when we finished a commit. We would state in a doc when they sent the commit, what it did, and how much is left to do regarding that commit. This in turn with another revised practice made sure that everyone knew when they could expect something and what would be finished.

A summary of new or revised practices to include moving forward:

- Organization
 - A new group created schedule was developed to cover everyones outstanding tasks and when we expected them to be finished. This was used previously, but this covered more topics such as the report revision, script revisions, bug fix versions, etc... The schedule also took into account any dependencies related to multiple connected tasks. This schedule helped everyone stay on track and prevented members from working on tasks that weren't the current priority.

A summary of any bad practices that will not be repeated moving forward:

- Burnout
 - Many of us were experiencing burnout due to the project nearing it's end date. Thus alot of work became sloppy and did not reach our standard that we were consistently reaching before.
 - Burnout also contributed to the fact that we were not consistently hitting our due dates set in the schedule that we created. This caused other tasks to be pushed to a later date since what was currently due was not close to being finished

Your team's best/worst experience during this sprint:

- Best:
 - Finding out that the bugs that would make our project crash were just formating errors in the rooms.txt file was incredibly relieving since we initially thought it was something much bigger.
- Worst:
 - Recording our presentation required a few too many takes since alot of us kept forgetting / messing up our lines in our script. Although the presentation did not take that many, it was still incredibly frustrating needing to redo a section of the presentation.

SECTION 4: SUMMARY

Project Limitations:

It is the norm for projects to have limitations and this one was no exception in terms of encountering obstacles. Firstly, our limited knowledge of the use of GIT negatively impacted our time efficiency. In Sprint 2, we unknowingly pushed 2 separate versions of the projects to our development branch which caused a significant conflicts. In order to resolve these issues, a few of the team members were required to create brand new forks. Furthermore, the debugging and clean-up tasks used more time than planned which further delayed subsequent tasks.

Another limitation was the total amount of sprints and their lengths. If additional time was granted, it would have positively impacted the end product. The additional time would have enabled us to have the ability to have more sprints as well as expand the scope of the project. However, the fixed project timelines meant we have to manage the scope of the project so tasks could be tested and delivered in a timely manner. Consequently, we did not have the timeline to start a new game development lifecycle so instead we leveraged off an existing template.

Project Accomplishments:

Our group created a project that realised a multitude of accomplishments. Firstly, we accomplished our initial goal of creating a game that was fully accessible to any kind of player. We did this by adding features that help provide information through distinct sounds and high contrast visual cues. We have also given the player alternate ways of play through keyboard, mouse, or both at the same time.

Accessibility was not the only type of addition we added. Gameplay enhancing features such as an interactive mini-map, a brand new game with newly created images, sounds, endings, and a combat system. None of the features mentioned were created entirely by a single person. Each team member had an input in creating these additions, which is why they meld seamlessly when the game is being played.

Finally, our teamwork during the sprints was of high quality. We accomplished all of our planned user stories and effectively used 3 different design patterns. In order to accomplish all of this, a project manager and a gitlab manager were assigned. Our project manager would assign tasks to team members per sprint, create schedules and schedule group meetings. While our gitlab manager would organize, clean and supply technical support relating to our gitlab repository.