

CSC207 LEC0103

FINAL PROJECT REPORT

Code Chronicles: Wizard's Quest

Version 1.0; Created November 10th 2023

Group Members: Hia Aggrawal, Kanupreet Arora, Mahak Mishra, Dhvani Patel

GitLab Repository: https://mcsscm.utm.utoronto.ca/csc207_20239/group_99

Link to Demo Recording:

https://utoronto-my.sharepoint.com/:v/r/personal/hia_aggrawal_mail_utoronto_ca/Documents/Code%20Chronicles%20%20Wizard%27s%20Quest%20Demo%20Video.mp4?csf=1&web=1&e=2XX69t&nav=eyJyZWZlcnJhbEluZm8iOnsicmVmZXJyYWxBcHAiOjJTdHJIYW1XZWJBcHAiLCJyZWZlcnJhbFZpZXciOjJTaGFyZURpYWxvZy1MaW5rIiwicmVmZXJyYWxBcHBQbGF0Zm9ybSI6IldlYiIsInJlZmVycmFsTW9kZSI6InZpZXcifX0%3D

SECTION 1: REPORT SUMMARY

This report details the process and documentation behind our game: *Code Chronicles - Wizards Quest*. The scope of the project has stayed relatively the same, apart from minor modifications to the implementation and logistical details, most of which took place during sprints two-four. Overall, we have successfully developed a game that immerses players in a unique coding experience while combining elements of strategy, puzzle solving and fantasy storytelling.

Below is a summary of our documentation and the changes that were made since phase one.

SECTION 2: PROCESS DOCUMENTATION

2.1 Sprint 1 Overview

(November 10, 2023 - November 17, 2023)

2.1.1 Sprint Overview:

Our goal for this sprint is to establish the primary details and groundwork for our game. This includes what the visuals/color scheme may look like, the logistics behind the game and the main classes. To do this, we will begin implementing classes for the menu, navigation, pets, visuals, audio, character customization, and interacting with other characters. That way we have a “skeleton” structure that covers nearly all aspects of the game. Each member will work on their assigned tasks as discussed in phase one.

2.1.2 Stories Selected for this Sprint:

Below is a table detailing updates and changes made to our user stories this sprint.

User Story	Updates/Changes	Owner
Character Customization	- <i>New:</i> Characters will have new attributes “code bytes” and “lives” rather than calculating it externally	Mahak
Menu	- <i>New:</i> The menu would have the option to reset/set the audio, music, theme and font.	Kanupreet
Navigation	- <i>No Updates/Changes</i>	Dhvani
Powerups (Code Bytes)	- <i>No Updates/Changes</i>	Hia
Visuals	- <i>New:</i> Title page screen with the game name before the game starts.	Dhvani

	<ul style="list-style-type: none"> - <i>Update</i>: The menu will open after the game loads, and there will be a button to access it anytime during the game if the player wants to change settings. - <i>New</i>: The game will also have a monochrome color mode for color-blind users. 	
Audio	<ul style="list-style-type: none"> - <i>No Updates/Changes</i> 	Mahak
Interacting With Other Characters	<ul style="list-style-type: none"> - <i>No Updates/Changes</i> 	Kanupreet
Pets	<ul style="list-style-type: none"> - <i>No Updates/Changes</i> 	Hia

2.1.3 Team Capacity:

We expect to be able to complete the components of the Leaderboard by November 17, 2023.

2.1.4 Participants:

Member	User Story	Tasks
Kanupreet	Menu	<ul style="list-style-type: none"> - Implement the menu's saveChanges() method: get the values from the menu's audioBox, musicBox, fontBox, colourModeBox and update the attributes of CodeChroniclesGameView correspondingly. - Create method headers for saveChanges() and restart(), which are called when the player clicks on the menu's "Save Changes" or "Restart" button.
	Interacting With Other Characters	<ul style="list-style-type: none"> - Create NPC (non-player character) abstract class, and SchoolMember and Prowler subclasses. - Create IgnoreCommand, TrustCommand, and HackCommand classes and respective interfaces to interact with the NPC in the player's current room.
Hia	Powerups (Code Bytes)	
	Pets	<ul style="list-style-type: none"> - Create a Pet abstract class which has abstract methods and attributes. - Create 3 Pet subclasses - MechaDoodle(), NanoBunny(), VirtualVulture() - Create constructors and initialize all subclasses and super classes.
Mahak	Character Customization	<ul style="list-style-type: none"> - Create a Character class and initialize it with its attributes + add getters/setters for private attributes - Within the Character class, create methods equiptItem() and unequiptItem() in order to allow the player to add/remove items from their inventory - Create images for the characters using a variation of picrew and initialize them in the subclasses. - Create subclasses MageCharacter, WarriorCharacter,

		AlchemistCharacter
		- Add a getCharacterImageView method
	Audio	<ul style="list-style-type: none"> - Begin to work on the background music for the game. Find audio that suits the same and download it in the form of .WAV files + add them to a folder <ul style="list-style-type: none"> - Primary background music - Furina: All the World's a Stage/Genshin Impact [Music Box] - Battle Music - Is your hair real - Kensuke Ushio - A Silent Voice soundtrack
Dhvani	Navigation	<ul style="list-style-type: none"> - Update room class to attributes to match game structure (remove Passage and PassageTable attributes)
	Visuals	<ul style="list-style-type: none"> - Update CodeChroniclesGameView class with music boolean, sound boolean, and mapToggle attributes. - Add headers for methods needed to show a map. - Create a menu class which creates a new dialog upon initializations - When the game loads, automatically show menu pop-up

2.1.5 Tasks Completed:

1. The method **saveChanges()** in Menu was implemented and finished.
2. The classes and interfaces for the three commands interacting with the two characters were finished.
3. The Player subclass was completed, including all the subclasses (MageCharacter, AlchemistCharacter, WarriorCharacter).
4. Background music was chosen according to what the proposed visuals will look like.
5. Pets and pet subclasses have been implemented.

2.1.6 Sprint One Backlog

- We changed powerups to quests, where the player has to win the quest to fight the prowler.

2.1.7 Sprint 1 Code Reviews

Story Reviewed	Story Owner	Name of Reviewer	Pull Request Link
[develop]: Visuals/CharacterCustomization	Dhvani Patel	Mahak Mishra	34041fe3
[develop]: Visuals/Menu	KanupreetArora	Dhvani Patel	c9fe61f0
[develop]: Interacting Commands	Kanupreet Arora	Hia Aggrawal	8824dee1
[develop]: Character Customization	Mahak Mishra	Dhvani Patel	9c415feb

[develop]: Pets (Since, we were learning how to merge and push, I accidentally pushed)	Hia Aggrawal	Hia Aggrawal	37f6111b
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2.1.8 Sprint 1 Retrospective

- Participants in the meeting:
 - Kanupreet, Mahak, Hia, Dhvani (All present)
- Tasks Unfinished:
 - Creating the restart button, implementing interfaces and interacting commands classes, integrating audio with the game as it runs.
 - Connecting pets to the game and implementing code bytes.
- Practices to not repeat for our next sprint:
 - First discuss the implementation logistics before starting to code the details. This is to avoid confusion in dividing up the roles.
 - Also make sure to work on the “develop” branch as advised by our T.A. That way it is easier to work with and the “develop” branch can be merged into “main” once the group members are sure that there are no conflicts.

2.2 Sprint 2 Overview

(November 17, 2023 - November 26, 2023)

2.2.1 Sprint Overview:

Our goal for this sprint is to continue where we left off and finalize the menu restart() method, the three main commands (hack, ignore and trust), character customization, quests as well as getting the initial visuals up and running. Unlike the previous sprint, there is more collaboration involved, hence, we must thoroughly plan out the logic in order to connect the back-end with the front-end. For this sprint, we will meet up several times in person to map out the game on a whiteboard and correct any misunderstandings with the initial game logic.

2.2.2 Stories Selected for this Sprint:

Below is a table detailing updates and changes made to our user stories this sprint.

User Story	Updates/Changes	Owner
Character	- <i>Changes:</i> Remove inventory functionality, including “special”	Mahak

Customization	<p>attributes such as diamondSheild and philosophersStone.</p> <ul style="list-style-type: none"> - <i>New:</i> NPC will be the superclass of Prowler and SchoolMember. 	
Menu	<ul style="list-style-type: none"> - <i>No Updates/Changes</i> 	Kanupreet
Navigation	<ul style="list-style-type: none"> - <i>Changes:</i> Rooms will have x-copied and y-copied attributes instead of room number attributes, for placement on the map's gridpane. - <i>Changes:</i> Removed passageTable attributes and related methods. 	Dhvani
Powerups (Code Bytes)	<ul style="list-style-type: none"> - Change: Power Ups were revised to Quests. 	Hia
Visuals	<ul style="list-style-type: none"> - <i>No Updates/Changes</i> 	Dhvani
Audio	<ul style="list-style-type: none"> - <i>Change:</i> rather than just doing a voiceover of the room name that the player is in, articulate the entire room description 	Mahak
Interacting With Other Characters	<ul style="list-style-type: none"> - <i>No Updates/Changes</i> 	Kanupreet
Pets	<ul style="list-style-type: none"> - <i>No Updates/Changes</i> 	Hia

2.2.3 Team Capacity:

We expect to be able to complete the components of the Leaderboard by November 26, 2023.

2.2.4 Participants:

Member	User Story	Tasks
Kanupreet	Menu	<ul style="list-style-type: none"> - Write the restart method which will be called when the player clicks the restart button. - This method should save the audio and visual settings of the current game, initialize a new game, and update the new game's settings with the previous game's.
	Interacting With Other Characters	<ul style="list-style-type: none"> - Implement methods to execute the HackCommand (revealCharacterIdentity(), countBytes(), playQuest()), TrustCommand (revealCharacterIdentity(), reducePlayerLife()), and IgnoreCommand(playerIgnore()). - Ensure game.player has enough code bytes when required for a command, and deduct when executed. - Implement the methods needed for interaction in Player and NPC classes.
Hia	Powerups (Code Bytes)	<ul style="list-style-type: none"> - Planned on changing the Powerups to Quests. - So, if a player tries to hack a prowler, the player plays a Quest. - Added the quest.txt file
	Pets	<ul style="list-style-type: none"> - Created Images for Pets (Nano Bunny, Mech a Doodle and Virtual Vulture) with the help of Imagine AI.

Mahak	Character Customization	<ul style="list-style-type: none"> - Create the NPC class and its attributes + getters/setters - Using a version of Piccrew create images for 5 School members and 7 Prowlers. - Collaborate with Kanupreet to come up with consistent names in order to ensure Prowler's
	Audio	<ul style="list-style-type: none"> - Create images for 12 rooms, name them and create first person descriptions. - Create audio files for them, adding them to the “audio” folder <ul style="list-style-type: none"> - Use the format roomName-long.wav for room descriptions - Use the format roomName-short.wav for a voiceover of the room names
Dhvani	Navigation	<ul style="list-style-type: none"> - Remove the roomNumber, passage, and passageTable attributes from the room and add x-coord and y-coord attributes. - Write room information in rooms.txt file
	Visuals	<ul style="list-style-type: none"> - Implement showMap() and setRoomScene() methods in CodeChroniclesGameView. - Write getNPCImageView(), getPlayerImageView(), and getPetImageView() methods in CodeChroniclesGameView to fetch images corresponding to the view’s current color scheme. - Create RoomIcon interface and UnvisitedRoomIcon and VisitedRoomIcon classes implementing the interface.

2.2.5 Tasks Completed:

This sprint, we figured out a majority of the details, such as finalizing several superclasses. We also finished a large portion of the creative process. This includes, writing up names/descriptions for rooms, NPC names, and creating the images associated with NPC characters, rooms and the color scheme. A majority of Commands were also implemented (hack, ignore and trust) along with the restart method.

Also, at the start of the sprint, several group members had misunderstandings about how the game logic from phrase one should be implemented. Hence, we had several in person meetings, which were extremely helpful. Below are some images from our planning process.

Room	NPC	Image	ProwlerImage
Front Gate	Grace Mike (School Member)		
Main Entrance	Noah Rodriguez (Prowler: Wealth Wraith)		
Administrations Office	Crownmark Markus (School Member)		
Dorm Rooms	Rachel Chang (Prowler: Dread Marauder)		
Hackers Hallway	Sophia Turner (Prowler: Night Shade Serpent)		
Coders Building	Olivia Peterson (Prowler: Sinister Shade)		
Library	Professor Zachary (School Member)		
Codercraft Classroom	Jake Fukuda (School Member)		
Locker Room	Ava Thompson (Prowler: Crimson Specter)		
Fourth Floor	Victor Reynolds (Prowler: Dark Howler)		
Cafeteria	Isabelle Stormrider (School Member)		
Side Entrance	Freyja Frostfall (Prowler: Lumina Wing)		

Figure 1.0: Screenshot of NPC details document

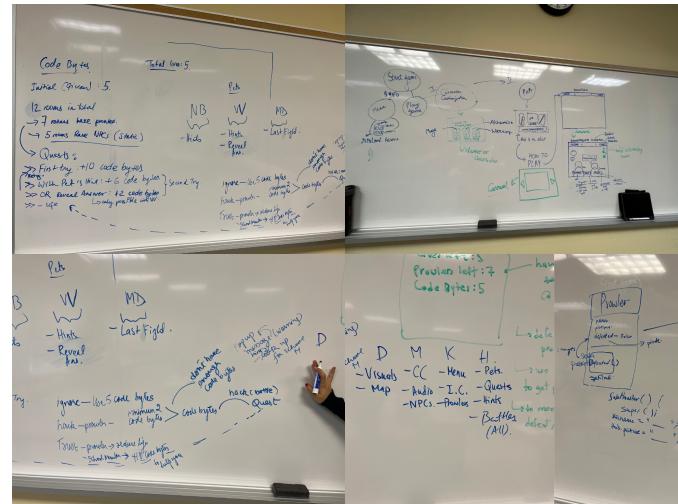


Figure 2.0: Game Design meeting notes

2.2.6 Sprint 2 Backlog

- Nothing

2.2.7 Sprint 2 Code Reviews

Story Reviewed	Story Owner	Name of Reviewer	Pull Request Link
[develop]: Room Visuals	Dhvani Patel	Kanupreet Arora	70a56252
[develop]: Player Commands	Kanupreet Arora	Hia Aggrawal	8944fb2c
[develop]: Character customization	Mahak Mishra	Dhvani Patel	fab40081
[develop]: Character customization	Mahak Mishra	Dhvani Patel	4953b95d

2.2.8 Sprint 2 Retrospective

- Participants in the meeting: Kanupreet, Mahak, Hia, Dhvani (All present)
- Tasks Unfinished:
 - Connecting the menu to frontend. For instance, the font size should increase for everything when updated in the menu.

- Polishing the three commands.
- Polishing the character customization screen. Although most of the character customization audio works, it overlaps and does not stop when moved on to the next screen.
- Practices to not repeat for our next sprint:
 - Originally, we had our branch names as the group member names rather than the functionality/user story that they implement. From now onwards, we will continue using that convention when branching our code.

2.3 Sprint 3 Overview

(November 26, 2023 - November 30, 2023)

2.3.1 Sprint Overview:

Our goal for this sprint is to make sure the back-end and front-end aspects of our code work together seamlessly, especially with the commands. At the end of this sprint, the room descriptions should be shown on the screen and also be articulated. The mechanism for adding and removing code bytes and lives should also be finalized. Finally, the menu should be able to show options such as font size and color adjustments. Hopefully, by the end of this sprint, only minor fixes and changes will be left to do.

2.3.2 Stories Selected for this Sprint:

Below is a table detailing updates and changes made to our user stories this sprint.

User Story	Updates/Changes	Owner
Character Customization	- <i>No Updates/Changes</i>	Mahak
Menu	- <i>No Updates/Changes</i>	Kanupreet
Navigation	- <i>No Updates/Changes</i>	Dhvani
Powerups (Code Bytes)	- <i>No Updates/Changes</i>	Hia
Visuals	- <i>No Updates/Changes</i>	Dhvani
Audio	- <i>New:</i> Button click sound effect added so that the user knows which objects are interactive.	Mahak
Interacting With Other Characters	- <i>Updates:</i> Deleting the “Hack”, “Trust” and “Ignore” Interfaces. - Deleting the Player initializer and attribute to get code bytes. - Deleting the playQuest() method.	Kanupreet

	<ul style="list-style-type: none"> - <i>New:</i> Initialize School Member and Prowlers through the parsing methods. 	
Pets	<ul style="list-style-type: none"> - <i>No Updates/Changes</i> 	Hia

2.3.3 Team Capacity:

We expect to be able to complete the components of the Leaderboard by November 30, 2023.

2.3.4 Participants:

Member	User Story	Tasks
Kanupreet	Menu	<ul style="list-style-type: none"> - Make fixes to menu.restart() method.
	Interacting With Other Characters	<ul style="list-style-type: none"> - Update HackCommand class to call prowlersQuest if npc attribute is an instance of Prowler and also changed input parameter. - Made a new interface Command so that the 3 Commands follow the Command interface properly with the execute() method. - Fix the constructors for NPC, Prowler and SchoolMember classes..
Hia	Quests	<ul style="list-style-type: none"> - Make Quests Screen.(forgot to push it to gitlab) - Make Last Battle Screen.(forgot to push it to gitlab) - Implement Last Battle View.(forgot to push it to gitlab)
	Pets	
Mahak	Character Customization	<ul style="list-style-type: none"> - Add methods for calculating codeBytes (i.e. adding/removing the specified number of codeBytes) - Add methods for deducting the lives of players.
	Audio	<ul style="list-style-type: none"> - Use Media Player and java.sound.sampled to have the background music play at the start of the game indefinitely at 50% volume. - Implement Character Description audio to play when a character is selected in the “Choose your character” screen. - Write help.txt + prologue.txt and generate .wav audio files for both. - Add methods articulateDescription and stopDescription <ul style="list-style-type: none"> - stopDescription should use this.clip.stop() and should be activated during transitions + if the player clicks on several rooms within a certain time frame - stopIntroductionAudio method is added. - Button sound effect added for ALL initial buttons (including the screen for quests)
Dhvani	Navigation	<ul style="list-style-type: none"> - Write a parseRooms() method in CodeChroniclesLoader to read through the rooms.txt file and initialize the rooms. - Enable player navigation. Implement methods to move players from one room to another.

Visuals	<ul style="list-style-type: none"> - Implement the showMap() method which is called when the Map button is set on action. - Populate the map gridpane in the method with roomIcon buttons.
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2.3.5 Tasks Completed:

We managed to get a lot done this sprint, however, the amount of changes needed was substantially more than we anticipated. As a result, we had several zoom meetings discussing how we can help each other with our implementations and collaborate on aspects of the code. For instance, dividing up aspects of the “Quest” visuals within the CodeChroniclesView.

First, in terms of what we managed to complete:

- The menu was fixed to accommodate all planned changes.
- The parsing of prowlers and school members was completed.
- The functionality for code bytes and lives was perfected.

And now, the changes:

- We decided to modify several of the visuals from sprint 1, for instance, changing how the screen looks for the introduction and how long the automatic transitions should be from the title page to the playable game. Here are some images of our re-designing process:

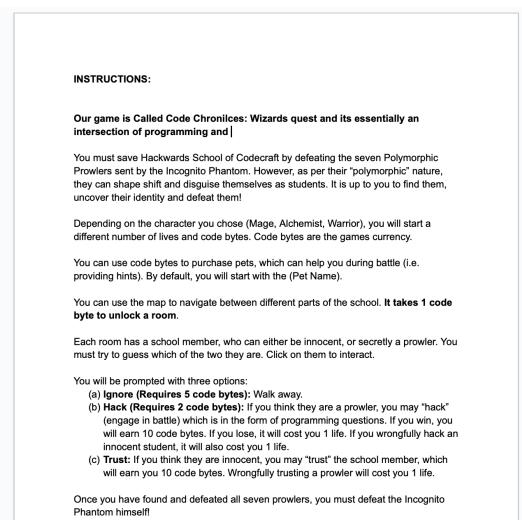
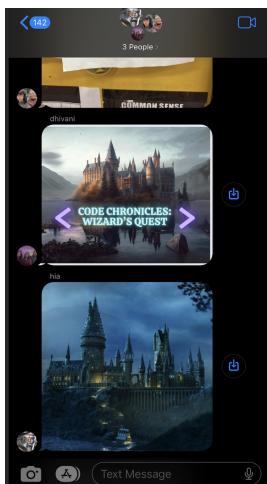


Figure 1.0: Screenshot of our intro redesigning

Figure 2.0: Rewriting the game instructions/prologue

2.3.6 Sprint 3 Backlog

- Nothing

2.3.7 Sprint 3 Code Reviews

Story Reviewed	Story Owner	Name of Reviewer	Pull Request Link
[develop]: Navigation Visuals	Dhvani Patel	Mahak Mishra	0266cb25
[develop]: Audio	Mahak Mishra	Dhvani Patel	437b319d
[develop]: Audio (edits)	Mahak Mishra	Dhvani Patel	0a43ee8d
[develop]: Interaction Commands	Kanupreet Arora	Hia Aggrawal	2de8dc85
[develop]: Initializing NPCs	Kanupreet Arora	Hia Aggrawal	20b9f157

2.3.8 Sprint 3 Retrospective

- Participants in the meeting:
 - Kanupreet, Mahak, Hia, Dhvani (All present)
- Tasks Unfinished:
 - Testing the game and doing the final changes.
- Practices to not repeat for our next sprint:
 - We had several conflicts when merging into “develop.” So, for aspects of the game that are collaborative, we should divide up the roles before starting to code. By making this change in our process, the branching/merging process was much smoother.

2.4 Sprint 4 Overview

(December 1, 2023 - December 5, 2023)

2.4.1 Sprint Overview:

Our goal for this sprint is to finalize the game, making sure that the back-end logic, visuals and audio work according to plan. In addition, this sprint should also include testing and creating test cases, especially for the back-end logic such as commands. Smaller details that were missing at the end of sprint three should also be

added. For instance, “prologue” and “instructions” screen, “pets,” the display screen, controls for voiceover and music through the menu and ensuring everything is monochrome when the color theme is changed to “monochrome” from the menu, music for quests and fixing up the button sound effect.

2.4.2 Stories Selected for this Sprint:

Below is a table detailing updates and changes made to our user stories this sprint.

User Story	Updates/Changes	Owner
Character Customization	- <i>No Updates/Changes</i>	Mahak
Menu	- <i>No Updates/Changes</i>	Kanupreet
Navigation	- <i>No Updates/Changes</i>	Dhvani
Powerups (Code Bytes)	- <i>No Updates/Changes</i>	Hia
Visuals	- <i>New:</i> Player now clicks through title page, prologue, and instructions before game starts.	Dhvani
Audio	- <i>Changes:</i> The volume of background music is lowered from 50% to 10% so character audios can be heard better. - <i>New:</i> Allow the player to turn off JUST music from the menu settings for audio. This is to ensure that the user has a choice of no background music and no speech separately.	Mahak
Interacting With Other Characters	- <i>Changes:</i> changing all methods from void to String return in three commands. - <i>Update:</i> School Member and Prowler text files. - <i>Changes:</i> Changed the Prowler, NPC and School Member constructors. - <i>New:</i> Make one interface for the Commands and let Ignore, hack, Trust implement the Command interface.	Kanupreet
Pets	- <i>Update:</i> Pet images and pet files	Hia

2.4.3 Team Capacity:

We expect to complete the leaderboard by December 5, 2023.

2.4.4 Participants:

Member	User Story	Tasks

Kanupreet	Menu	<ul style="list-style-type: none"> - Test and make fixes to the menu.restart() method and appearance. - Testing
	Interacting With Other Characters	<ul style="list-style-type: none"> - Write school member and prowler names, descriptions, and rooms in schoolMembers.txt and prowlers.txt, which will be parsed to initialize them. - Write the .parseSchoolMember() method in CodeChroniclesLoader to parse the schoolMembers.txt file, initialize the school members and place them in their respective rooms. - Write the .parseProwler() method in CodeChroniclesLoader to parse the prowlers.txt file, initialize the prowlers, and place them in their respective rooms.
Hia	Quests	<ul style="list-style-type: none"> - Implement Parse Quests - Add getter and setter methods for Quests. - Implement Quest View Visuals - Implement ParseLastBattleQuestions() - Implement Last Battle method
	Pets	<ul style="list-style-type: none"> - Update the images of the Pets and update the pet classes. - Update prowler class - Reverted Pet class to Pet interface to obey the design pattern, Strategy - Optimized the Pet subclasses to fit better with the Pet interface and the rest of the files - Added a minor change in CodeChroniclesGameView to make the backgroundImage for the first slide fit better.
Mahak	Character Customization	<ul style="list-style-type: none"> - Debug any errors with the classes and remove unused attributes and unneeded functionalities - Create test cases and ensure that every aspect of the player class is up to date with the front-end code.
	Audio	<ul style="list-style-type: none"> - Fixed the "No such file/directory" error - Audio is made more seamless: audio does not overlap when multiple buttons are pressed, character audio stops playing when view is exited, background music always plays. - 3 distinct media player objects + boolean attributes added - Added voice lines (.wav) for school members and prowlers in "audio" folder - Audio controls from the menu are added: able to turn music on/off and voiceover on/off. Background music should work if the game is restarted.
Dhvani	Navigation	<ul style="list-style-type: none"> - Update the setCurrentRoom() method in Player to check if the player has enough code bytes to unlock a new room.
	Visuals	<ul style="list-style-type: none"> - Update beginning title loading, prologue, and instructions views so they are buttons and the user can click anywhere to continue.

	<ul style="list-style-type: none"> - Update the setRoomsScene() method in gameView so only undefeated prowlers are shown. - Create a new RoomPreview dialog when the player clicks on the RoomIcons in the map. This new preview window displays the room name and description if the room has already been visited, and a .goButton to move the player into the room. - Add and implement the “Pet” button and the method in calls when set on action.
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2.4.5 Tasks Completed:

- “Prologue” and “Instructions” screens are completely implemented.
- Controls for voiceover and music now work through the menu. When “music” is toggled off, only the music should stop. If “voiceover” is ALSO toggled off, then there should be no audio at all.
- As required, everything is monochrome when the color theme is changed to “monochrome” from the menu, music for quests and fixing up the button sound effect.
- The Quest should work as expected, deducting lives and adding to the total number of code bytes. This part should also be supported with different music.

2.4.6 Sprint 4 Backlog

- Nothing

2.4.7 Sprint 4 Code Reviews

Story Reviewed	Name of Author	Name of Reviewer	Pull Request Link
[develop]: Parsing	Kanupreet Arora	Hia Aggrawal	70bf31f7
[develop]: Navigation + Interaction Visuals	Dhvani Patel	Hia Aggrawal	6330b401
[develop]: Visuals (Last Battle)	Hia Aggrawal	Dhvani Patel	ce054b74
[develop]: Audio (Menu)	Mahak Mishra	Dhvani Patel	593b5d8a
[develop]: Character Customization Visuals	Dhvani Patel	Mahak Mishra	333d80b0
[develop]: Testing	Kanupreet Arora	Hia Aggrawal	c9b6c247

[develop]: Audio (Character customization audio)	Mahak Mishra	Hia Aggrawal	73504b73
[develop]: Audio (NPC Audio)	Mahak Mishra	Kanupreet Arora	ec47928a
[develop]: Quests	Hia Aggrawal	Kanupreet Arora	51665d61
[develop]: Pet Interface	Hia Aggrawal	Hia Aggrawal	6e60c676

2.43.8 Sprint 4 Retrospective

This sprint had the most merges as we realized the mistakes and misinterpretations of the certain instructions as we were creating test cases and testing. Hence, we had to fix them and add final touches to the visuals, audio and even some of the back-end code that conflicted with the front-end design.

- Participants in the meeting: Kanupreet, Mahak, Hia, Dhvani (All present)
- We did final testing, recorded our game and did the final testing.
- Pushed final changes to gitlab and submitted the group project.
- Tasks Unfinished:
 - None (Everything went well!)

SECTION 3: SUMMARY

The following section briefly summarizes both our project **accomplishments** as well as its **limitations**.

Collectively, we have accomplished a lot during the process of creating our game. Our final implementation was very close to our original plan, as can be seen through the user stories, which remained fairly consistent apart from minor changes. After laying out the basic code structure, we spent a majority of the sprints making the final product more detailed (i.e. instructions text, audio, visuals).

Some limitations of our project are the following:

- I. There is a minor bug for a rare case that we did not consider when testing. If the player has collected all

possible code bytes and they are all completely spent but somehow haven't unlocked all rooms, they will be unable to unlock those rooms for the remainder of the game.

- II. In certain cases, the player would be unable to purchase any new pets. However, the pet that they start with can be purchased, as shown at the start of the game.