Team Milestone Report

Milestones 2

Team Name:	Sang Rin
Game Name:	MANZO
Milestone:		2

1) List all team members and their roles.

Gyuwon Na	Tech lead
Won Kim	Art lead
Seokhwa Hong	Test lead / sub art & audio
Seohyeon Min	Producer / sub art & audio
Jiyeop Kang	Level designer

2) Simply explain the team's structure and organization.

Our team has a flat and equal structure, where everyone is on the same level. This allows us to have open, comfortable communication, where all members can share ideas freely without hesitation.

3) Give a 3~5 sentence description about your game.

Our game is a rhythm-based exploration set underwater, where players move in sync with the rhythm by clicking in the desired direction. As the player dive deeper, they follow mysterious Morse code signals that lead them to strange fish. These strange fish seem to be hiding secrets about the missing grandmother. The shallow waters are bright and playful, but the deeper you go, the darker and more unsettling it becomes.

4) What are the gameplay instructions?

Click your mouse on the beat to move the player in that direction on the next beat. Avoid rocks using the same timing and try to catch fish for money. This money will allow you to upgrade your submarine, letting you explore deeper into the sea. We implemented moving, catching fish and earning money so far.

5) What are the primary methods of gameplay input? (Keyboard, mouse, VR, touch screen, Kinect, etc?)

- Only mouse

6) How many players can play this game at once?

It is a single player game.

7) List the major components and systems that were designed and created during this milestone for each of the following disciplines:

- Debugging, Testing, Optimization
  -
- Art
  - Boss and Fish asset, Reefs, Ship and fuel, background, mouse effect, UI
- Gameplay, Game Design
  - Game over, money system
- Music, SFX, Audio
  - Background music, Boss music
- Physics
  - Collision reflection, TOI calculation
- Tool Development, Building Pipeline
  - UI manager

8) List 5 quality attributes that are your project's area of focus during this milestone, or the qualities that your project excels in. How does your project demonstrate each quality attribute?
- Focus during this milestone
1. Flocking

     We implemented this system with a lead fish followed by a group of 10 fish. However, due to the long formation, some fish reacted strangely when colliding with the reef, and the movement looked too artificial. To address this, we adjusted the system to spawn fish randomly and allow each one to make its own decisions independently. We were unsure whether to use a linked list or tree structure to manage the fish, given the need to follow a lead fish. For temporarily, we decided to simplify the system by assuming that the 'this' object is the lead fish, with other fish following its direction in the decision-making process. But there are more refinements needed to ensure obstacle avoidance and natural flocking behavior, so we'll continue to improve this aspect.

2. SVG parsing and Texture

3. Boss and JSON

4. Better ship and reflection

     There was an error when the ship moved a short distance. The bug occurred because the ship was supposed to move a certain distance in the direction of the mouse, so I changed it to simply take the direction value and move in that direction by a specified force. The movement logic for the ship seems quite solid now.

     I also developed the feature where the ship bounces off rocks. The line segment of the wall it collided with is being properly retrieved, but there's a bug where the ship gets stuck inside the rock instead of bouncing when it hits a corner or collides at very high speed. I hope to have this fixed by the first week of Milestone 3.

5. Rework Skill(module) system and add skill

9) Rate your project in the following categories 1~10: (Your grade will not be changed based off of your ratings.)
- Gameplay 7
- Visuals 8
- Audio 5
- Technical feats 10
- Overall presentation and cohesion 10

10) Look over this long list of features. For each one, mark if this feature has already been implemented, will be implemented in the future for the final product, or will not be implemented for your project:

Feature	Implemented	Will Implement	Won't Implement
Voice-over audio			X
In-game SFX		O	
Background music		O	
Spatial audio		O	
UI/menu SFX		O	
Advanced/dynamic audio filters		O	
Dynamic lighting/shading		O	
Vector graphics		O	
Sprite-based animation system		O	
Sprite scaling		O	
Sprite rotation		O	
Particle effects	O		
Image masks		O	
Partial-transparency image blending or alpha blending methods		O	
Parallax backgrounds	O		
Multiple layers of background graphics		O	
Kinematic/skeletal art		O	

Feature			
Scripted motion using vector paths		O	
Animation tweens			X
Multiple levels/environments	O		
Asymmetrical gameplay			X
Advanced physics simulations		O	
Local multiplayer			X
Networked multiplayer			X
Downloadable content or online content fetching			X
Any other network features			X
Integration into web technologies (Such as web portals)			X
Component-based architecture	O		
Game objects use C++ interfaces	O		
Game objects are data-driven from factories			X
Menu systems		O	
HUD		O	
File parsing for gameplay content, such as levels, scenarios, enemies, etc.	O		
In-game level editor			X
Scripting language integration		O	
Metaclasses, reflection, data-binding		O	
Live object property inspection			X
Art pipeline tools		O	
Audio pipeline tools		O	
Engine/game build (compilation) tools		O	

External gameplay editor			X
In-game gameplay editor			X
Testing tools and advanced debugging features			X
Ability to jump into the game in a given scenario for testing		O	
Fast-forward and rewinding gameplay			X
Extensive/complex debug drawing		O	
In-game performance visualization		O	

11) What other advanced features do you plan on implementing that are not listed, above? What other advanced features have you implemented, already, that's not listed, above?

Except for what was written during the previous Milestone 1, it seems there are no features that weren't mentioned above.

12) Assess your project's scope based off of questions #10 and #11… How has the project's scope changed since last milestone? Did it grow/shrink or stay the same? Why? Justify the change in scope. Do you think your team is on track to complete every feature that is planned? Why or why not? Please go into detail with these questions.

Currently, we are focusing on creating the foundational features of the game and developing various managers. We are also working on fixing the bugs that we glossed over in the previous milestone to make the game more solid. Overall, I feel like we are finishing the sketch of the entire picture. There are various aspects of the game that need adjustment, which has broadened the scope. Thanks to the team members who have been working hard alongside me, we were able to complete everything on schedule as planned. However, since the scope of our game turned out to be much larger than we anticipated, we will need to move forward faster than initially planned and bring some of the upcoming tasks forward by a few days to keep up with development

13) Generally speaking, what's the next step for your project? What's the direction that this project is moving and how will the future features' work be split between your members?

Now it's time to dive into the deep sea. Since the difference in atmosphere between the surface and the deep sea is a key feature of the game, we are eager to enter Phase 2. To

achieve this, a color manager needs to be developed to adjust the screen's color tone based on depth, and spatial sound also needs to be implemented. Since Gyuwon expressed interest in sound, it seems that Gyuwon, as the tech lead, will be the one to develop it.

We've laid the groundwork for the boss battle, but it hasn't yet been made interactive with the player. We need to effectively record the bosses' locations and plan the boss battles to create a spectacular and enjoyable experience for the player. I trust Seokhwa will tie up these aspects nicely.

However, before we move on, I want to make sure that all the errors discovered up to Milestone 2 are thoroughly resolved. Currently, the game crashes when the X button is pressed, and there's also a bug with the collision detection where it fails to recognize fast collisions, causing objects to get stuck. Additionally, Gyuwon has been working on the font, which isn't finished yet, and I hope we'll see the final product soon.

Everything else will be distributed flexibly, considering the team members' interests and current tasks. We'll take a break this weekend and hold a team meeting next weekend.

14) Please list any issues your team has dealt with during this milestone: (This can be technical issues, personal hardships, team disagreements, etc.) What was the plan to overcome these issues?

      The collision calculations were too complicated and difficult. I plan to start over and go through them slowly from the beginning. Also, due to our inexperience with GitHub, we made an incorrect push, which almost caused a major conflict and led to nearly losing the code. I realize now that we need to be extremely careful when using it.

15) Extra notes for the instructor! (Completely optional!) As a team, you can use this area to tell me anything else you find important! Does your team think you'll have the best game in the class? Why? Does your team deserve extra credit for something? Tell me! Seriously, anything else you want me to know, put it, here!