FIT3040 Studio 2

Group Assessment Two

Grim Catastrophe - Project Plan

Due: Friday 12th April 4pm

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Table of Contents

Concept

Grim Catastrophe will be 2D Puzzle Platformer that will revolve around the use of different transformations to solve platforming challenges.

The player takes control of the outcast cat of the Grim Reaper as it attempts to make its way back home to the underworld. Along the way, the player must overcome three bosses and master the use of three different forms which will be unlocked as they progress through the game (cat, fish and bird). The levels between each boss will be used to introduce new mechanics and familiarise the player with their current forms.

The game distinguishes itself through its endearing art style and its departure from combat in favour of lateral thinking as a means of problem solving. This makes the game a broadly accessible, fresh and rewarding experience for players.

We have two main target audiences. The first is the young teenagers of today. By choosing an innocent art style and avoiding combat in favour of puzzle platforming mechanics the game is equally accessible to males and females and unobjectionable to parents. The second target audience is gamers who grew up with 2D platformers. Specifically the game draws on nostalgia for vibrant and playful platformers such as Mario and Maplestory.

Narrative

Grim Catastrophe is set out in a modern day planet earth with a twist of being able to see bizzare things due to the origin of the protagonist, being the ex-animal reaper and also the Grim Reaper's pet. There are three main areas in the game, starting with the grassy/forest area which is the home of the fish. This then leads up to an industrial terrain, resting within is the mighty eagle and finally the land above in the "heavens" within the clouds which is the home to the mythical narwhal.

The protagonist of the game is Grim, who is the Grim Reaper's pet. He has been banished to Earth because of his behaviour which angered the reaper. He was stripped off any power he had as a demi-god of the underworld and now is just a mere cat. However, he still possesses the mighty scythe which was gifted to him personally by the reaper himself, which allows the holder to morph into any animal being whose soul has been consumed by the scythe. Using this scythe, Grim has to find a way to be able to make it back to the underworld, the place he calls home.

Standing in his journey back to the underworld are many obstacles and enemies he has to overcome. The three mighty creatures, i.e. the fish boss, bird boss and narwhal boss have been sent out by the reaper to ensure Grim does not find his way back to the underworld. Each of the bosses have minions protecting the path to their chambers.

The Fish Boss is able to Jump from one water body to another which is within his sight, spit water at bone-crushing speeds and able to generate a giant splash when he leaves a pool of water.

The Bird Boss is able to drop egg bombs, swoop down at mighty speeds and spawn tornadoes with a single flight of his wings.

The Narwhal boss is Unique in the sense that he is able to survive both underwater and above land. He also possesses the ability to fly, which is why he uses the sky as his base, away from any pesky intruders. He is also able to shoot laser beams out of his horn.

During the entire game, defeating each boss permanently allows Grim to morph into a version of the boss itself. For example, defeating the fish allows Grim to morph into a fish, granting him the ability to travel and breathe underwater. All this has to be achieved by Grim using the environment as there is no means of hand to hand combat in this game.

Defeating the Narwhal boss reveals the narwhal to actually be a hidden unicorn. This mythical being gives Grim the ability to respawn a portal to travel back to the underworld, where he faces the Grim Reaper.

Characters

Cat

The cat is the default form of the player. It has four animations; idle,moving, jumping, hurt.
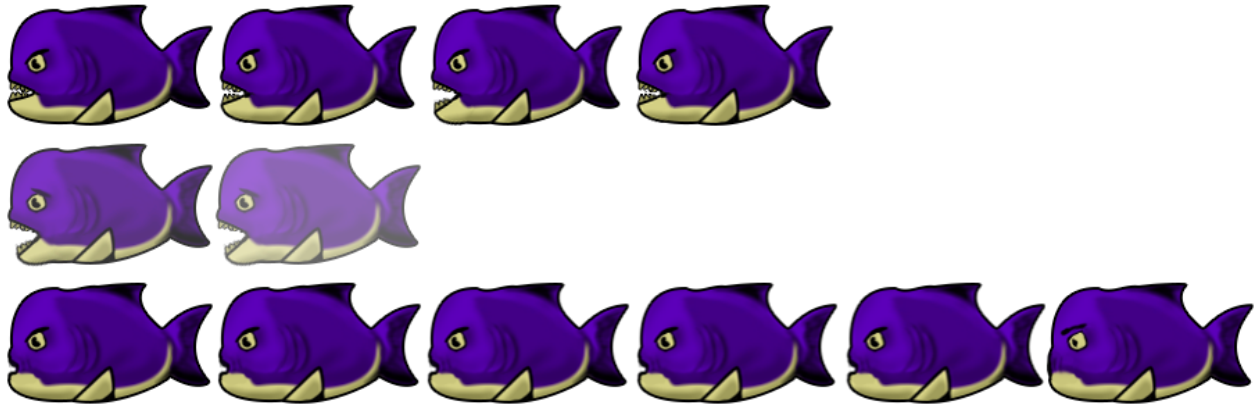
Grim Reaper

The Grim Reaper initiates the narrative by banishing his cat from the underworld. He has a passive sprite and an angry sprite.
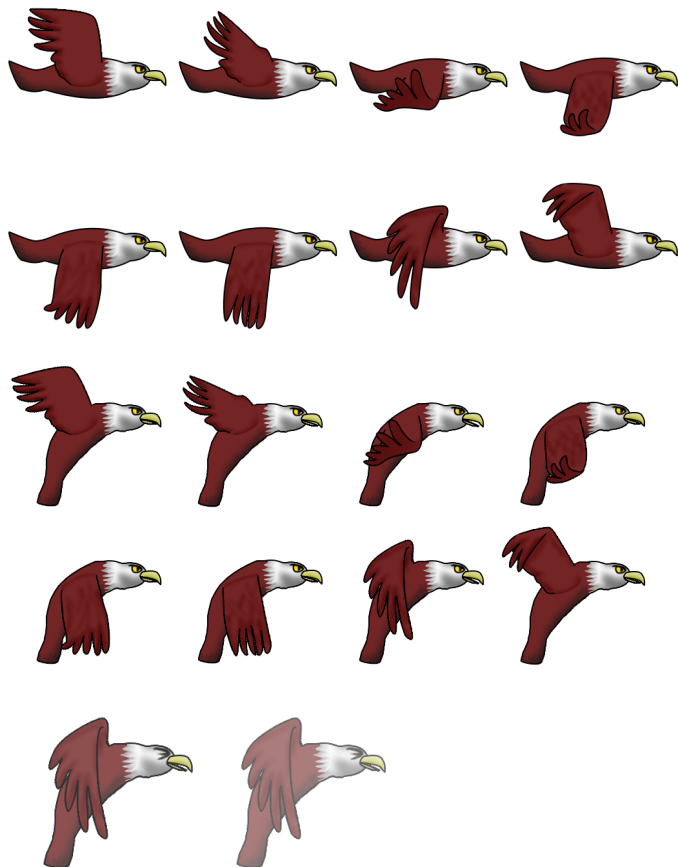
Fish Boss

The fish boss is the first boss players encounter. It has three animations; idle,hurt and spitting.
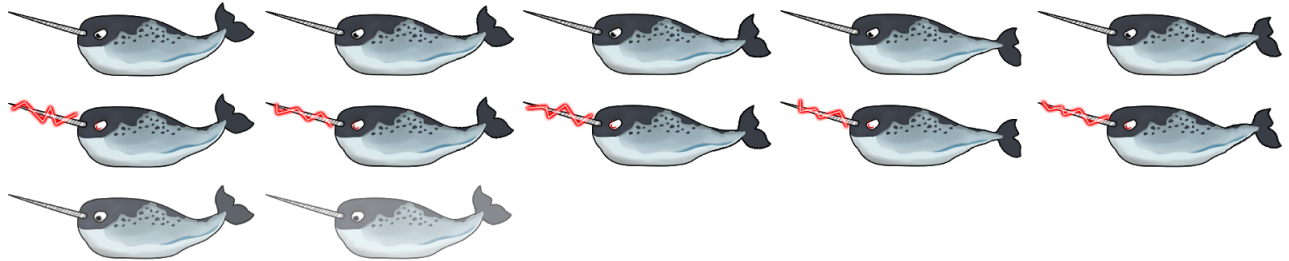
Bird Boss

The bird boss is the second boss the player will encounter. It has 4 animations; flying, perching, blowing wind and getting hurt.

Narwhal Boss
The narwhal boss is the third boss the player will encounter. It has three animations; idle, hurt and laser-beam.
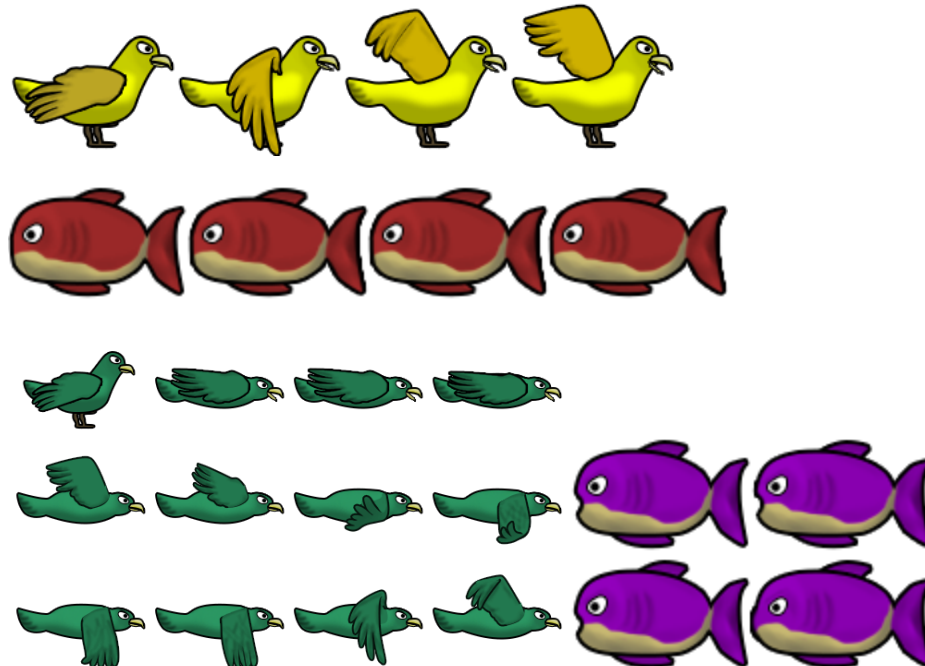
Unicorn
The unicorn emerges from the narwhal upon completing the boss encounter. It has a single sprite.

Minions
There are two fish minion animations(spitting fish and jumping fish) as well as an animation for an egg laying bird and a set of animations for the swooping bird; idle, swooping, flying.
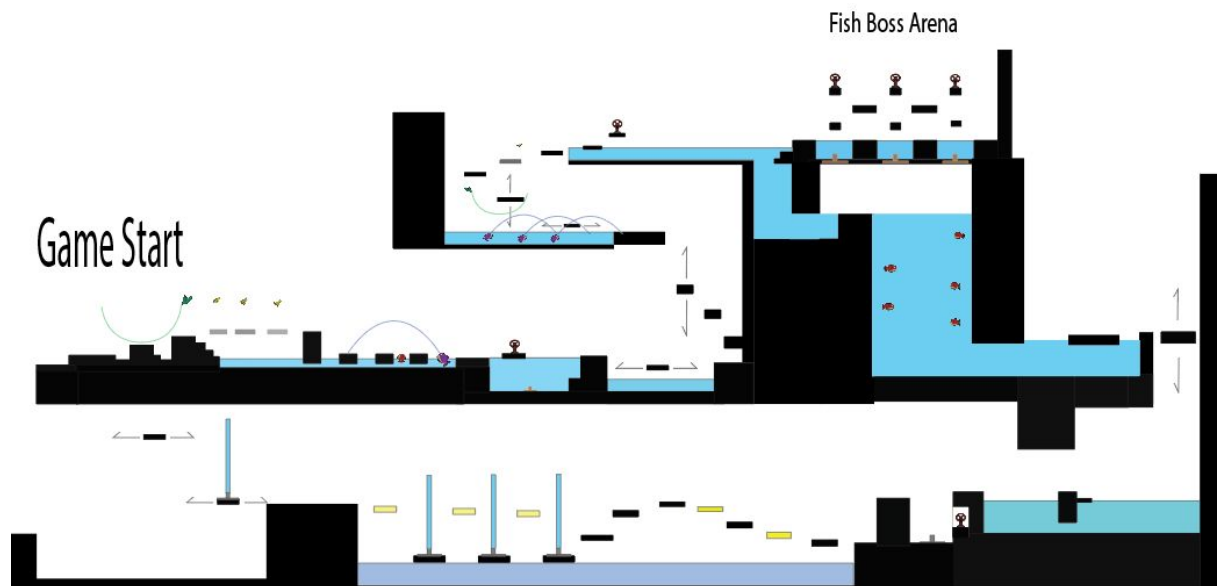
Level Scripts

The game will have three boss fights with platforming challenges in between. While the world is seamless, we approached the intervening segments by splitting them into three levels. This is to assist in design and does not mean that players should perceive the intervening levels as distinctly different levels. As the game is a platformer, the player objective will always be to reach the next boss by overcoming the platforming challenges in their path.
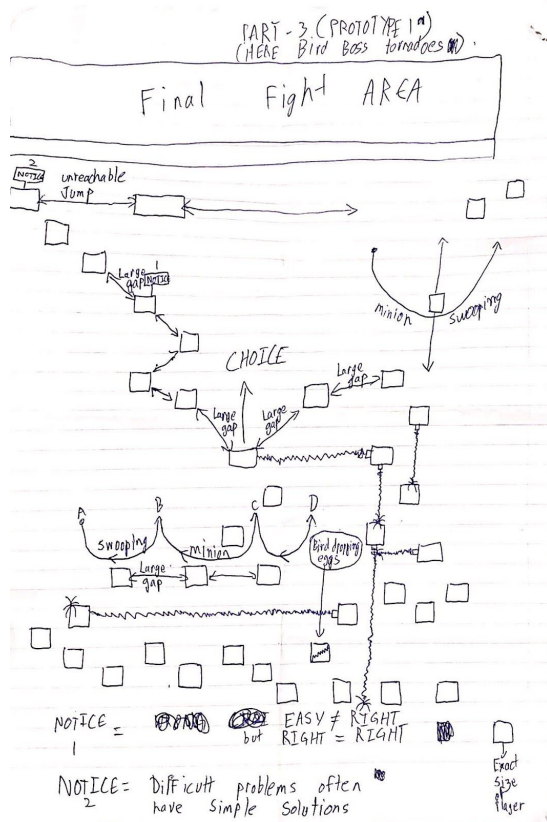
We design each level with a crude paper prototype before implementing the level in unity. As unity has tile painting functionality it is very easy to create and modify levels in the engine. This allows us to implement and test levels as we design them.

The following is a blueprint design of the levels from Game Start, to the Fish Boss and then to the start of the Bird area.

The following is a paper prototype of our level which lead to our Bird boss.

PART - 1 (Prototype 1)

Bird/Nun who swoops
Bird minion
Laying eggs
Too high
to Jump
WATER

(Here Bird Boss Starts Swooping in)
PART - 2. (PROTOTYPE 1)
Large gap
Laser
Larger gap
Large gap
Bird laying eggs
Bird laying eggs
Bird laying eggs
Laser
spark
A C
B
Bird minion
Laying eggs
swooping

PART - 3 (PROTOTYPE 1ª)
(HERE BIRD BOSS tornadoes in)
Final Fight AREA
unreachable
NOTICE Jump
2
Large gaps/obstacle
minion swooping
CHOICE
Large gap
Large gap
Large gap
B
C D
A
Swooping minion
Bird dropping eggs
Large gap
NOTICE = EASY ≠ RIGHT
1 but RIGHT = RIGHT
NOTICE = Difficult problems often
2 have Simple Solutions
Exact size Player

The following is a rough layout of our existing level in the engine along with the first page of the draft just scene. This is just to give an example of how the platforms will be laid out ingame, as in the final product, the level will take place inside a factory and the sprites will reflect this.


The final levels will go from our Bird boss, into the sky toward the Narwhal boss. At this point in the game, the player has access to all their forms and have encountered all the hazards the game has to offer. Therefore, the design will include all different obstacles with the main difference being things which will restrict the player from flying past everything with their newly acquired bird form.

Using the current moving platforms, a new dynamic of platforms moving both horizontally and vertically at the same time is going to be introduced. Another point to note is that, now the bird boss transformation has been attained, players would typically just fly around and wait for the cooldown to reset and repeat, making the fish and cat now almost useless. To tackle this issue, we will be applying far more pressure on the player by being less forgiving of mistakes and giving the player less time to think. This will result in difficult fast paced levels that are both demanding and awarding.

As an example, the level will include "high stress" sections, where there will be no safe ground to stand on and spikes encapsulating the area. This forces the player to stay morphed between the fish and the bird, having to reach the end of this section before their morph timer is up.

The following is a screenshot of the prototype level, before the Narwhal boss. The main principle we wanted to convey, was the presence of these spike obstacles which will force the player to use their bird form carefully.
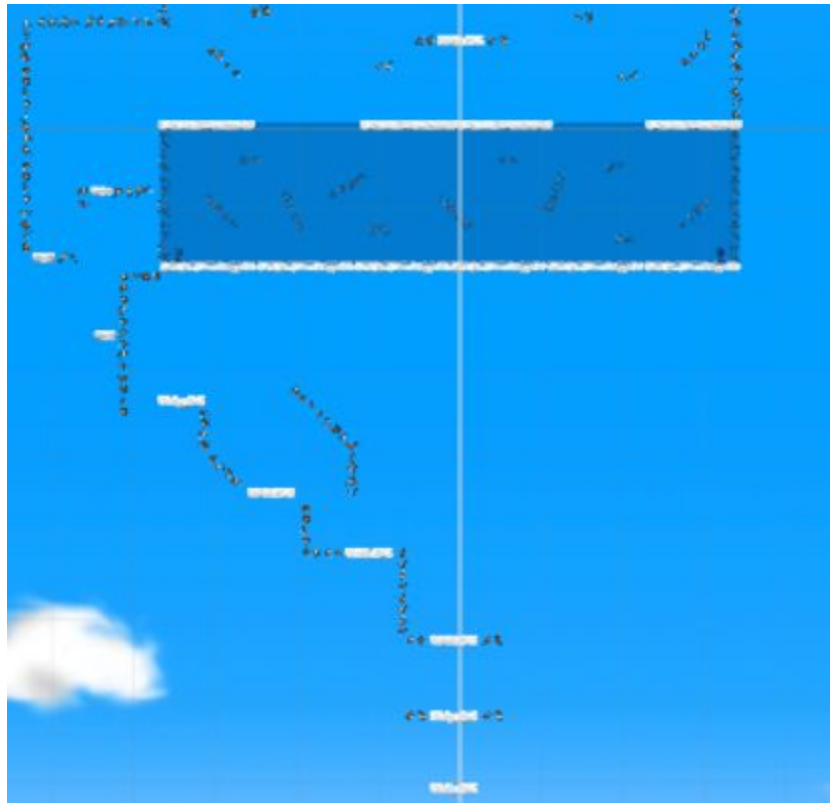
HUD

Are there any special features concerning the user interface or interactions? Is there any inventory or health system that needs to be included Show how this will look in the final product and how it will work in terms of feedback and usability?

The game's HUD will provide the player with all the information they require, which includes:
- Health
- Morphing Time
- Unlocked Forms
- Continues

All but "Continues" is reflected in our current UI, as we are overhauling our old health system with the addition of a new checkpoint system.
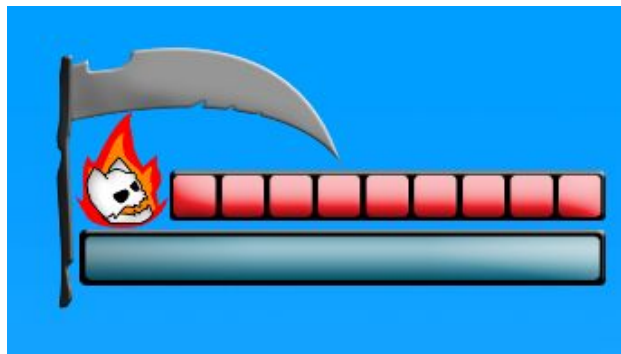
Each element of the UI is serves a purpose.

The scythe indicates which forms the player has currently unlocked, in the above example it is none, but in an example later on, the scythe will have an upgrade to indicate a new form.

The skull indicates what form the player is currently in and will change accordingly.

The red health is displayed per unit, as the Cat will have 9 Lives.

Finally, the blue bar displays the morphing time. If the player is in any form outside of the Cat, it will drain. Once it reaches zero or the player changes back into the Cat, it will begin to refill.

Previously, the health bar would change according to which form the player was in, as each form had their own health.
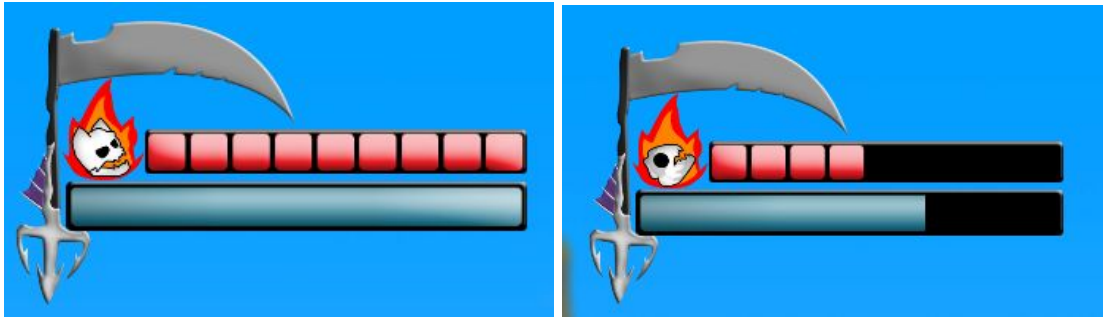
But now as we are combining all health bars into one, this will no longer be as necessary to display.

The only new piece of information that will be required to add to the UI is the amount of retries or "continues" the player has. The player will start with 9 and will be required to start a new game once they reach 0.

Assets Required

The following is the assets, both art and code/classes, that we intend to create for the project.

Tilemaps
- Grasslands
- Factory
- Industrial
- Clouds

Fish Boss
- *Art*
  - Drain sprite for fish boss pool

Bird Boss
- *Art*
  - Underwater pipe
  - Pipe platform
    - These shoot out water
  - Electrical cables
    - Spark particle effect/animation
  - Electrical platform
  - Flickering lights (Animated, 2 frames)
  - Small Laser generator (Animated, 5 frames)
    - Laser beam
  - Tornado generated by Bird Boss (Animated, 2 frames)
  - Power/Telephone Pole
- *Classes*
  - Bird Boss
  - Wind (Projectiles)
  - Electric Cables
  - Water Pipes

UI
- Player HUD
- Title Text Graphic
- Menu Buttons

Misc
- *Art*
    - Water Container Sprite
    - City Background Graphic
    - Forest Background Graphic
    - Music (2 Tracks total)
        - Boss Theme
        - Ambient level music
    - Updated Health UI
- *Classes*
    - Checkpoint system
    - Player Life redesign

Sounds
- Player
    - Morph (Smoke Bomb)
    - Jumping
    - Flapping Wings
    - Hurt
    - Splashing Into/Out of Water
- Fishes
    - Splash Into/Out of Water
    - Spit
    - Hurt
- Birds
    - Flapping Wings
    - Squawk
- Narwhal
    - Movement
    - Laser
        - Charging
        - Firing
    - Lightning
    - Hurt
- Misc
    - Electricity Spark
    - Laser Beam (Can share with Narwhal, on a smaller scale)

Project Milestones

This section lists our project's significant milestones, including what is required to reach this milestone and what it means to the project.

Week 6 - All Functional Art Assets Completed
By the end of Week 6, we plan to have all our functional art assets completed. Functional art assets refers to the art required for gameplay purposes. For example, things such as platforms and enemy sprites are considered functional art assets, whereas backgrounds and cutscene art are not.

This will require all tilemaps, special platforms, hazards and obstacles to be created, ready to be implemented to the game.

This milestone is significant as it will mark the beginning of being able to create and test our levels in their entirety.

Mid Semester Break - All Levels Playable
By the end of the Mid Semester Break, we plan to have all of our levels playable. This means that the gameplay of our game will be playable from start to end. Note that playable does not mean that our levels are completed, and will still be tested in order to meet the adequate challenge we feel the game requires.

This will require all our levels, to be completely laid out in the main scene of our game, including all enemies, obstacles and boss fight areas.

The presence of this milestone helps us ensure that the main layout of our game will be completed, as it will be much easier to adjust our levels that are already made, as opposed to creating them from scratch.

Week 9 - All Art & Sound (Excluding Cutscenes) Completed
By the end of Week 9, we plan to have all art and sounds, outside of the cutscenes, created. This means that all background graphics, UI and other art displayed during gameplay will be completed. It also means that all our required sounds will be recorded and edited, ready to be implemented into the game.

This milestone serves as the point where everything used during the gameplay of our game will be completed, and will not only require implementation and general polish.

Week 11 - Cutscenes Completed and Sounds Implemented

By the end of Week 11, all cutscenes will be completed and sounds implemented. This requires the introduction, ending and each boss cutscenes to be completed, along with every sound effect implemented and functioning in the game.

At this point, all the game's content will be completed and all that is left to do for the remaining three weeks of project time is to polish the game and fix any bugs that may be occurring.

Project Timeline

The following is our project timeline, listing each task each member needs to complete by the end of the week. Each task is colour coded to indicate which member is going to complete the task. Tasks with a line through it indicate a task which has been completed. Not all tasks that have actually been completed have been crossed out, as they are things we revisit.

Project Tasks and Milestones

	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Midsem Break
Deliverables			Project Revision Doc		Project Plan	Journals 1	
Milestones					All Functional Art Assets done		All Levels Playable
Tasks							
Coding				Bird boss class	Checkpoint System		
				Fish boss cutscene	Wind Movement		
				Combining lives	Obstacles		
Design	Bird Boss redesign			Bird Levels	World Map Blueprint		
				Narwhal Levels			
				Fish Levels			
Art		Drain Sprite	Factory tilemap	electrical platform	bird boss waterpipe	Health UI	BUFFER
		Concrete platforms	Grass tilemap	laser/water shooter	Cloud tilemap	flickering lights	
		Concrete background/tiles	Street tilemap	water container	Tornado sprite	City backgrounds	
				Telephone pole	electrical wires	Forest backgrounds	
				Telephone pole switch	water spout revision		
				conveyor belt platform			
				laser			
Sound				Ambient Music Draft		Boss Music Draft	
					Player, Fish and Bird	Narwhal and Misc	
Legend							
Andrew							
Liem							
Sushi							

Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
				Beta Test		Major Project Deliv
						Journals 2
	All Art (Excluding Cutscenes) Done		Cutscenes Completed			
			All Sound Effects Implemented			
Start General Game Polish & Bug Fixing						
All Menu Graphics	Intro Cutscene	Fish Cutscene	Narwhal Cutscene	BUFFER	BUFFER	BUFFER
buttons	Ending Cutscene	Bird Cutscene				
title text						