

# ART JOURNAL: 2D MONSTER FARM

Design process by

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Lecturer

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## 1. Personal goals for this semester

For this project, my main goal is to focus on art and be creative as much as possible. I also really want to learn a bit about animation. These are my two main goals.

## 2. NPC

### Animation:

While thinking of which animation to use, I decided on Bone Animation simply because I already have a bit of experience with software that uses a similar technique called Live2D. But sadly Live 2D doesn't work directly with Unity so I look for an alternative. I tried DragonBones which is a free Bone animation software. Sadly I do not allow 3<sup>rd</sup> party Unity packages because I need to install a DragonBone package to import it into Unity.

Learn Unity Spline System > It works very similar to DragonBone but is a bit clunky for my taste.

### NPC's design:

The designs for the NPCs actually came from random doodling I do on scrap papers. I simply sketch randomly as the first sketch. Then I think a bit deeper: Since the game's shop was planned to sell three types of wares: Monsters, Tiles, and Food, I tried to find at least 3 keywords for each shopkeeper. So these were the following keywords I had in mind.

1. Monster shopkeeper:
  - a. Scarred (due to handling monster)
  - b. Rough/Tough (a very experienced person with aggressive monsters and softer ones)
  - c. Simple (since their job is to tame the monster, their clothes should be fit for on-field activities)
2. Tiles shopkeeper:
  - a. Farmer (since the person knows the soil the best)
  - b. Physically fit (consider the job of maintaining the different types of tiles)
  - c. Cozy (since the tile are like a personal room for the monster)
3. Food shopkeeper:
  - a. Nutritionist (as the name implied)
  - b. Smart
  - c. Carefree (as the job of this person is not something physically demanding as the three above they can be more carefree and slacking)

With these keywords in mind, I looked at my random sketches and find the most suitable one, and polished them further. Finally, I came up with these 3 designs but they were not final yet.



Figure 1: Potential designs for tile shopkeeper, food shopkeeper, and monster shopkeeper (Hai Lam Dang, 2022)

With these potential designs in place, I started working on the monster shopkeeper first as they are the most important ones. When drawing digitally I had to remember to make each body part of the NPC separate to animate with Unity Bone Animation. This kind of drawing was not completely new to me as I did something similar before with Live2D, a different sprite animation software. But this was my first time using Unity's system so I had to spend a few hours watching and reading tutorials. Not only that but also test out with a test sprite. Once the animation of the head was working I then work on the rest of the character.

The rigging part of the full-body however was not fun. I didn't know it was much harder to add the bones and how they interact with each other in the full-body than just the head. But it was a frustrating learning process I learn a lot in the end. The end animation was good enough for me.

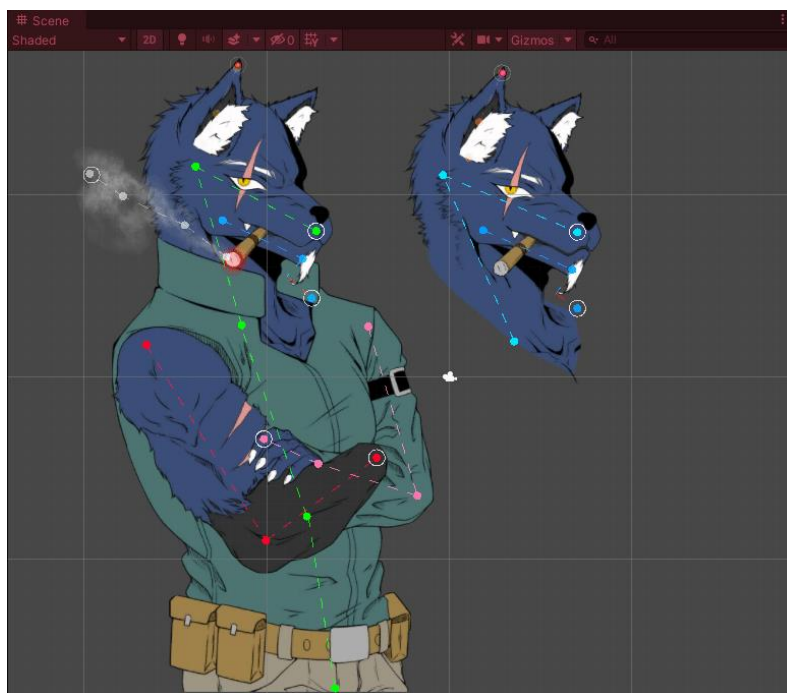


Figure 2: NPC's animation. Left: Full body & Right: Test animation with just the head (Hai Lam Dang, 2022)

But as time went by the idea of the other NPC became a lower and lower priority for our team. So I scaled down the ambitious 3 NPCs. Instead, I make this one NPC has more personality through dialog lines.

But I felt it was still lacking something and an idea popped into my head. I can challenge myself by making an interaction system inspired by an NSFW game I love called “**Life With A Slave -Teaching Feeling-**”<sup>1</sup> by FreakilyCharming. This game is rather famous in the visual novels community as one of the games which popularize the “head-patting simulator” mechanic in visual novels. So I took this opportunity to test this out with the Event System as required in the performance requirement.



*Figure 3: Interaction mechanic (Hai Lam Dang, 2022)*

This mechanic is really just some sprinkle outside of the main game loop which shall bring some personality to the game. It could also be something for the player to explore.

### 3. Background

#### Planning the Background:

As this game was a farming simulator the first idea floating around was to make the surrounding a farm. But the more I thought the boring it got. Not to mention this idea somewhat contradicts what I mentioned in the NPC. A farming setting was too “peaceful” in comparison to our monster shopkeeper. So like always I sketched out very randomly. After that, I tried to find some keywords.

- Fantasy
- Lab/ Sci-fi
- Peaceful-like (semi-contradictory)

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<sup>1</sup> Visual Novel Database: <https://vndb.org/v18636>

The next step was to consult the artbooks I owned and created a mood board of all the scenes which fit these keywords.



Figure 4: Mood board for BG ideas.

- First row: *Gujian 3 -Official Artbook-* (Aurogon Shanghai, 2020)
- Second row: *"Legend of Sword and Fairy VII" Official Set Art Complete Works* (Softstar, 2021)
- Third row: *Ourai no Gahkthun ~What a Shining Braves~ booklet* (Liar-soft, 2012)

I wanted the base to be a fantasy floating platform while sci-fi elements are around it. *Gujian 3* and *Sword & Fairy 7* are fantasy RPGs while *Ourai no Gahkthun* is a visual novel set in a steampunk world. Because of that these 3 games were my biggest inspiration. With that set, I improve my random sketches into something more coherent.



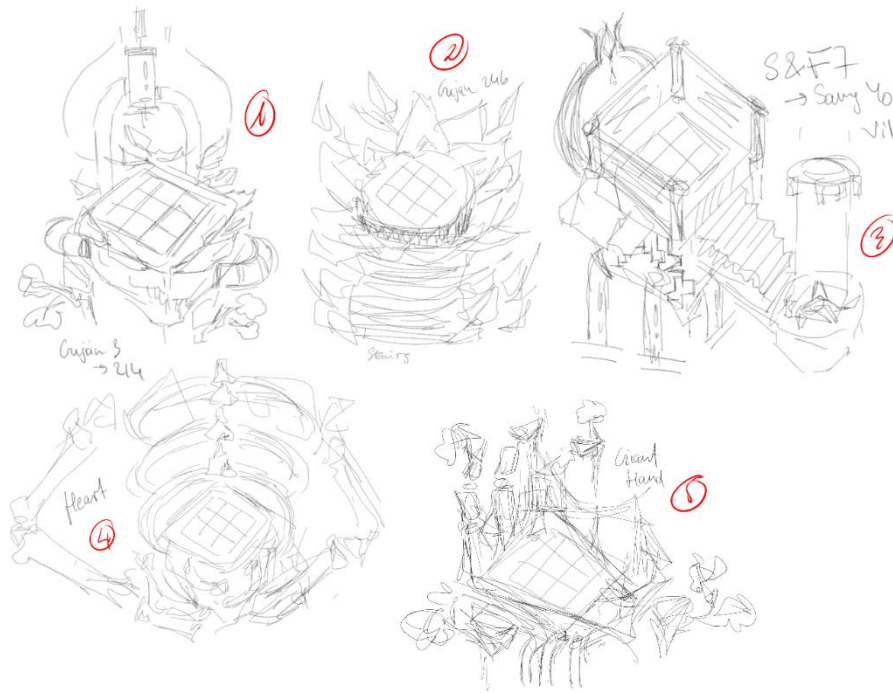


Figure 5: Five sketches for the background (Hai Lam Dang, 2022)

These are the following 5 sketches I came up with. I then asked Timur (the game programmer) for his thoughts and which would look the best. His favorite was (5) and (1). I personally like (1) and (3) the most. So in the end I tried to combine elements of (1), (3), and (5) together. Of course, all these sketches were meant to be limited in farming space. But that was what we planned as it made the player think more of which type of tiles to buy and use.

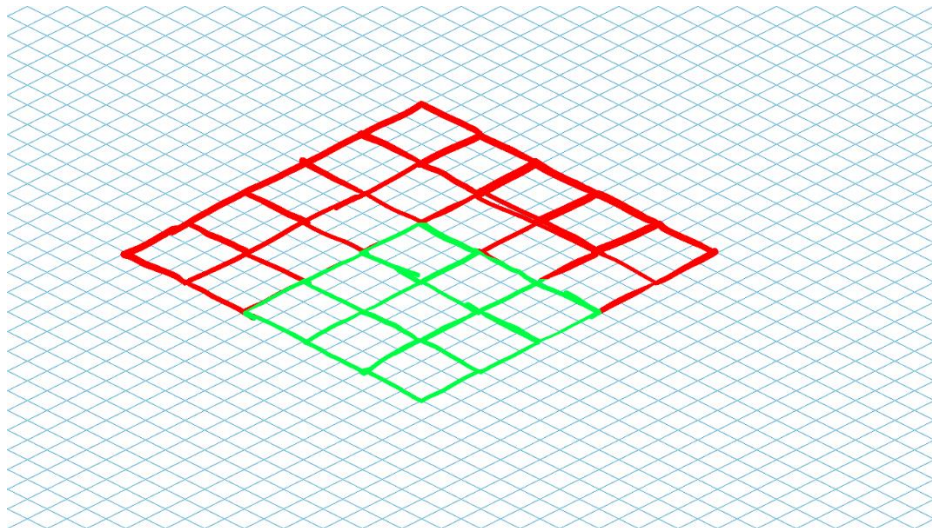
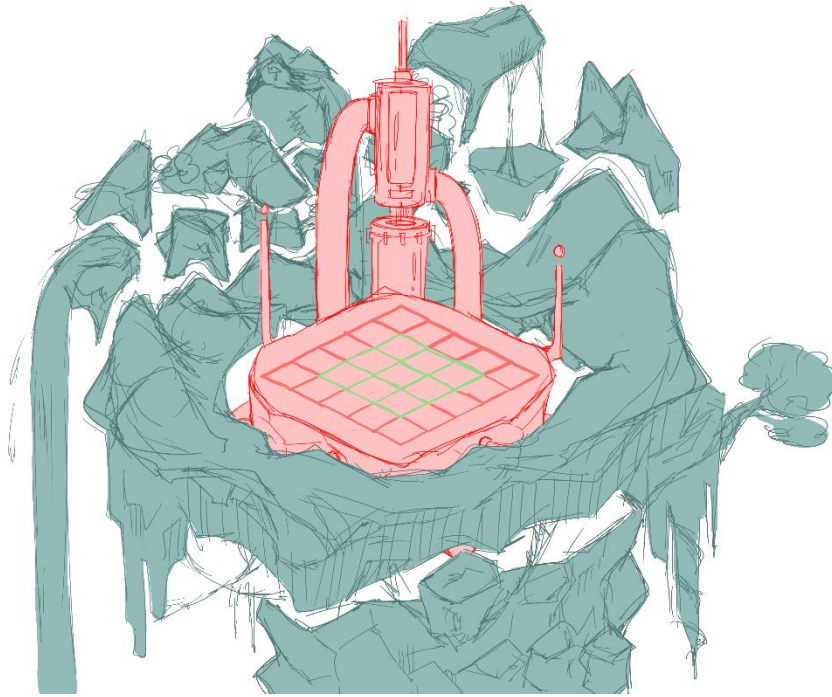


Figure 6: Visualization of the limited tiles' space (Hai Lam Dang, 2022)

The player started with nine tiles with the default TreeTile. 2 more rows were unlockable through buying new tiles.

After playing around with the 3 ideas a final sketch of all the ideas is combined into a better background.



*Figure 7: Final background sketch with all 3 ideas combined (Hai Lam Dang, 2022)*

With this, I began to polish the art. Here was where I made a rather big mistake in hindsight: As I wasn't sure what size to make the background, I simply take the tiles from the sprite sheet and compare them. And thus the background canvas kept getting bigger and bigger until it reached 4K resolution. This, of course, meant the PSB raw file would be very big. I needed the PSB file to be imported to Unity in order to animate the floating isles.

One small mistake leads to another. As the size of the PSB file was very close to the limit of one push in git. I didn't remember to push right after I imported the PSB file. Instead after the import I already created most of the animations for the background. When I was finished and go push my commit, it didn't work. A few hours of work were almost down the drain. Luckily, I made a backup of the project delete all my commits that couldn't be pushed, and started slowly back from there. This time I pushed my commit each small change to stay on the safe side.

As for the animation of the floating isles: The controller and animation file from the backup file are re-useable. Only a small percentage of the animations are lost when I tried to re-import them in the correct project but these animations could be remade very quickly.

The background behind the floating rocks is a simple gradient background with only a canvas size of 6x3 px. Special thanks to a simple tutorial by Tarodev<sup>2</sup>

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<sup>2</sup> Gradient Background in Unity: <https://www.youtube.com/watch?v=8UWFrcxh7I>



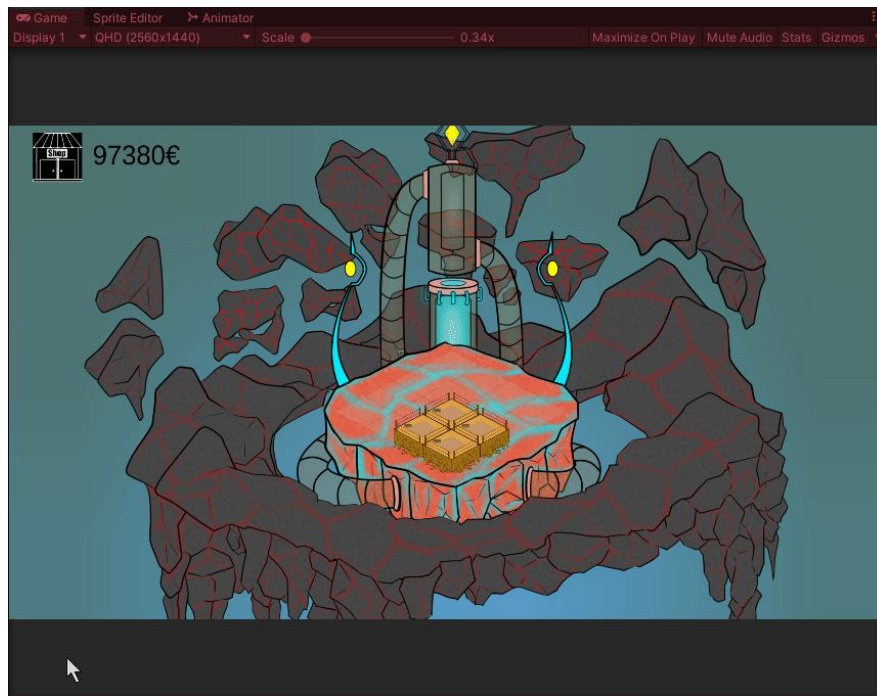


Figure 8: Final complete background (Hai Lam Dang, 2022)

## 4. Monsters Design

### 1. Dragon

Dragon is a stable monster in all fantasy games. So it was not a wild idea to include it as our very first monster. The design for this monster was very simple. But I wanted it to look more like a gargoyle dragon than a typical dragon. For the four stages of the monster, it was very simple. First, it started as an egg, then the egg hatched. After the egg hatched the dragon grew into a child dragon and finally an adult dragon where it can be harvested.

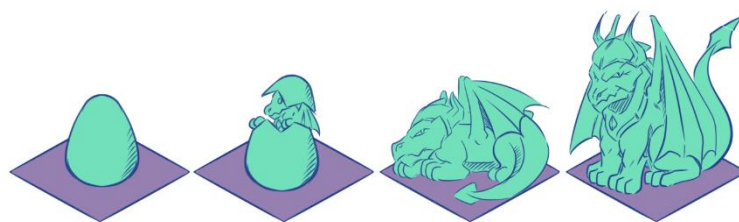


Figure 9: Stages of Dragon (Hai Lam Dang, 2022)

### 2. Lizard

Since a dragon is a flying lizard I just had to include the normal lizard as the second monster in the game. The lizard also had a more simple design as it had to be visually distinguished from the dragon. So the chosen color for it was red in oppose to the dragon.

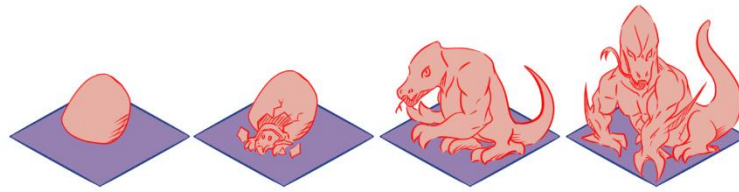


Figure 10: Stages of Lizard (Hai Lam Dang, 2022)

### 3. Black Blob

This is my first and still most satisfying design of the monster in this game simply because I had the chance to go wild on this one in oppose to a more rigid design of the other monster. As this monster is simply a patch of living liquid, it has no real form. So I simply sketch wildly since I do not have an idea what the monster should look like. The end design of the monster did look a bit different than the sketch, after all, especially the mask element (which I actually reuse later).

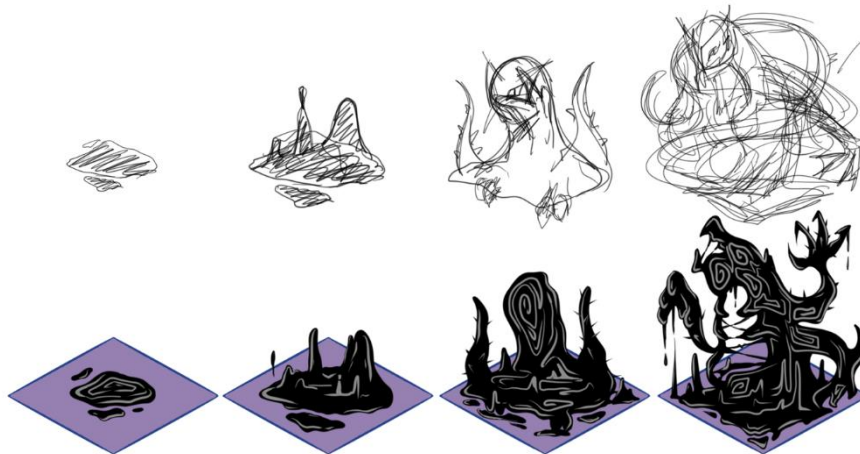


Figure 11: Sketch and end stages of Blob (Hai Lam Dang, 2022)

### 4. Freebie

Critical feedback was given to us to include a “freebie” monster as the player could hit zero money making the game soft block itself. As the monster is a freebie I intentionally do not want it to be cool looking. So I simply create some basic shape for it. Funny enough I thought of my math class in high school about the number of angles in a shape. Thus the freebie monster was created and at each stage, the shape gains an angle.

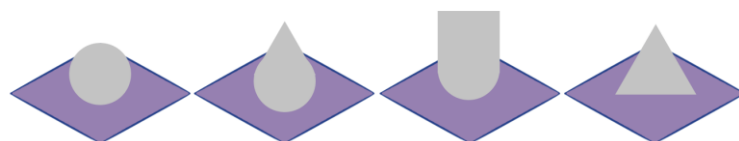


Figure 12: Stages of Freebie (Hai Lam Dang, 2022)

## 5. Bird

As mentioned in Blob, I re-used the mask element in this monster. First I want to make a mecha-looking monster out of this mask but as we were implementing a new tile type in the game it would be better to add a monster that represented the type the best. The new tile is a SkyTile and birds are always associated with flying in the sky. So a phoenix-like bird monster was created.

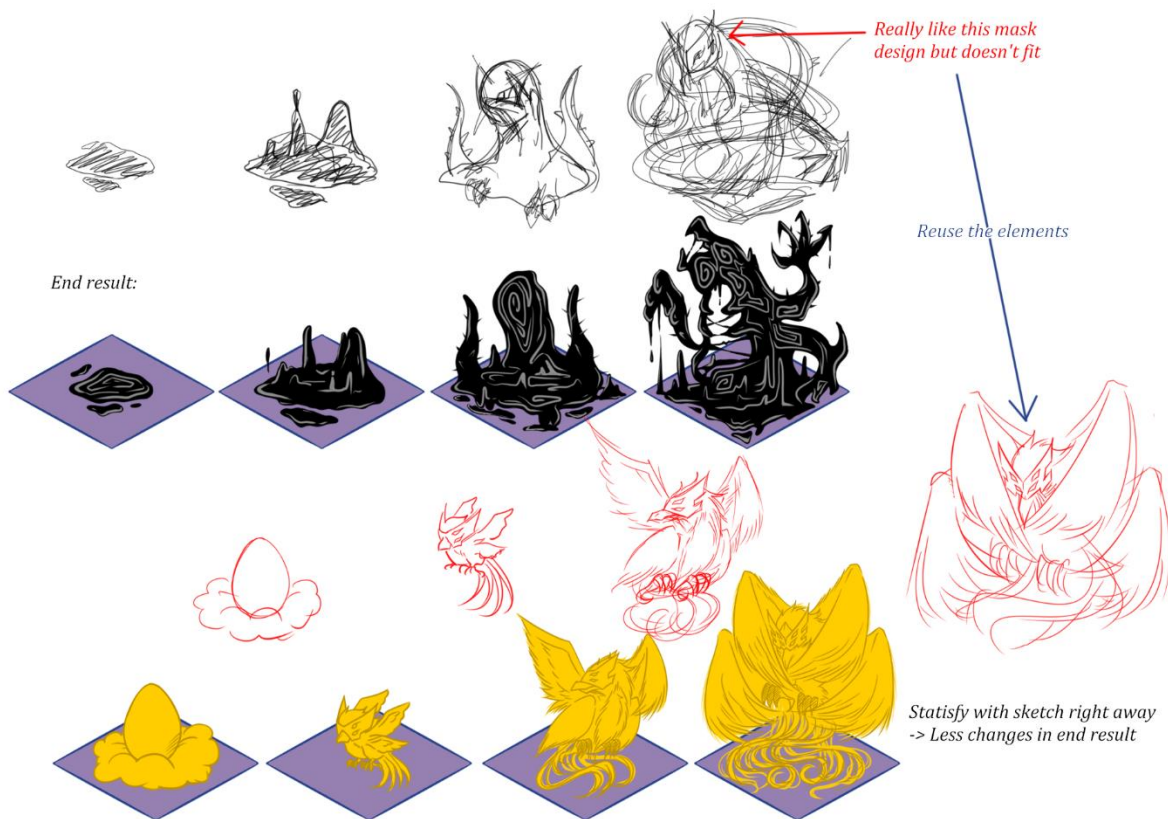


Figure 13: Reusing the elements of Blob's sketch in Bird (Hai Lam Dang, 2022)

## 6. Pig

"A flying pig" has always been a synonym for "impossible" such as "I will do X when pigs fly". People say it when they will do something when an impossible condition is fulfilled. It's just another way to refuse to do something. But then when Youtube suddenly recommend "Pig (Three Different Ones)" by Pink Floyd to me I was simply inspired by the album's cover. Then I remember there was an incident that happened with that flying pig-shaped balloon. It caused the cancellation of multiple planes' departure and landing in the UK. This is the second monster that prefers SkyTile over other tiles.

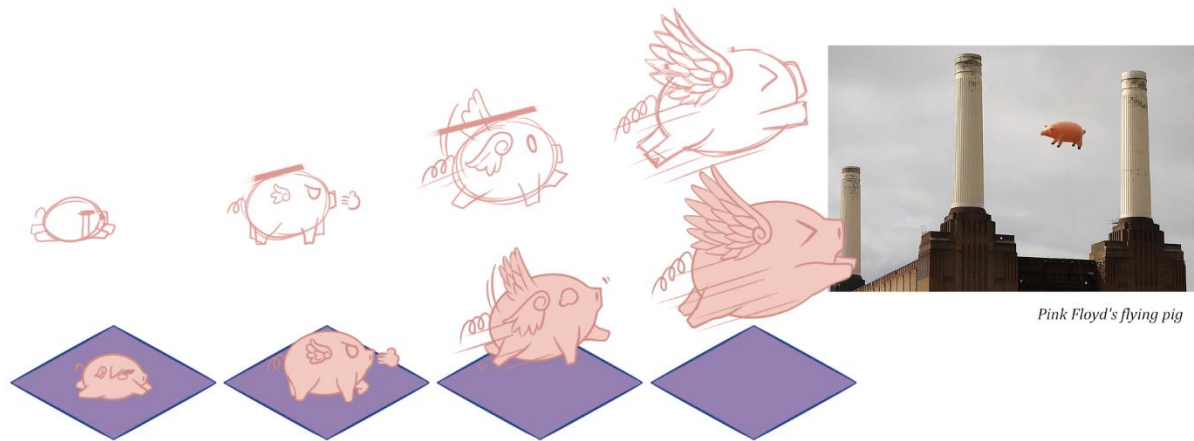


Figure 14: Sketches, the final design of Pig (Hai Lam Dang, 2022) & Flying Pig Recreates Pink Floyd Album Cover. Photo by Oli Scarff, Getty Images (<https://www.gettyimages.de/>)

## 7. Turtle

As we created our third type of tile which has a lava surface. There are not many animals that can live upon such a hot surface. So I had to be inspired elsewhere. Turtle has always been one of the sacred animals in Asia along with the dragon, phoenix, and qilin. Since the game already has a dragon and a phoenix, only the turtle and the qilin are missing. So I combined the two into one. Of course, the name turtle was chosen for the sake of simplicity and less confusing for the players who might be too well-known with the qilin but they are definitely more familiar with the turtle.

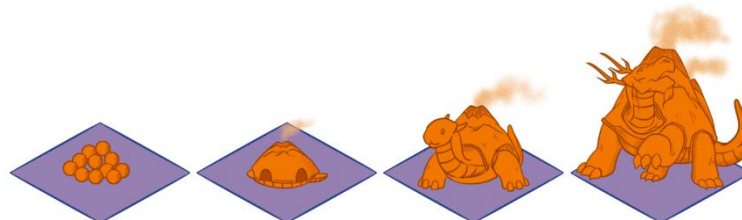


Figure 15: Stages of Turtle

The idea was to have the shell of the turtle be a volcano. Like how the concept of the earth is on a giant turtle's shell in some part of Asia. As the turtle older the characteristic of the qilin is more visible such as the horns and the beard while still having the overall design of the turtle.

## 8. Golem

Similar to pig this monster was inspired by a real-life event. Specifically the blue lava in Indonesia. It happened at Kawah Ijen volcano, Indonesia. The blue lava was very mesmerizing even if it was just a photograph of it.





Figure 16: Blue Lava at Kawah Ijen volcano, Indonesia. Photo by Martin Rietz (<https://blogs.equ.eu/>)

So I couldn't help myself but use this picture as the base of this monster, a golem. As I need to create a monster that represents the lava tile, it would make sense to create a rock like a monster held together by super-looking energy, in this case, the blue lava. It starts as a little rock and turns more and more humanoid with each stage.

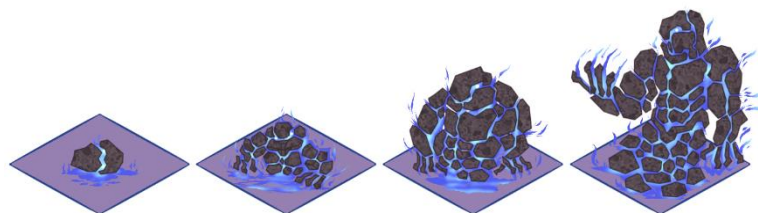


Figure 17: Stages of Golem (Hai Lam Dang, 2022)

## 5. Tiles/Plots and Miscellaneous Design

The overall concept of the tiles is that each tile should represent an element.

### 1. WoodTile

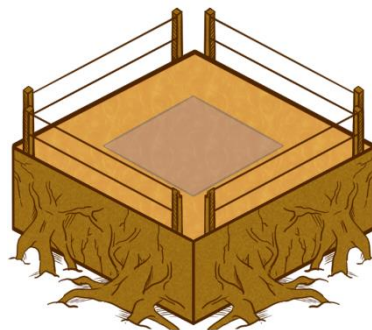


Figure 18: First tile in the game: WoodTile (Hai Lam Dang, 2022)



The first every tile in our game. At first, it was not supposed to be looking like a cut tree. It should look like a standard cage with electric fences around it. But the more I thought about the future direction of the tiles' design, I should change it. That's where the idea of each tile representing an element came in. This concept is very simple and it will make future designs of each tile much easier for me.

I decided not to remove the fences. Instead, I added roots on the outside of the tile while letting the face has a lighter color to mimic a cut tree. The texture on the colors is free texture on my art program Paint Tool SAI.

## 2. SkyTile

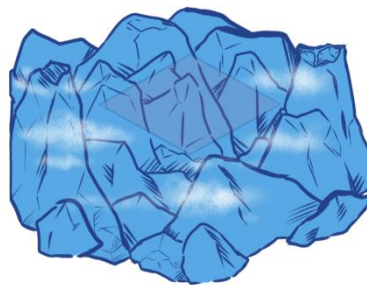


Figure 19: Second tile: SkyTile (Hai Lam Dang, 2022)

The second element I wanted to showcase was air. This meant the tile shouldn't have a surface, unlike the WoodTile. I thought of mountain ranges and clouds hanging around mountain peaks. So I tried my best to represent those elements in this tile. The color was the most tricky part for me. While in the end, I chose blue, I did notice many people thought this was an ice tile despite the name. This tile design was something I should improve if I had more time for sure.

## 3. LavaTile

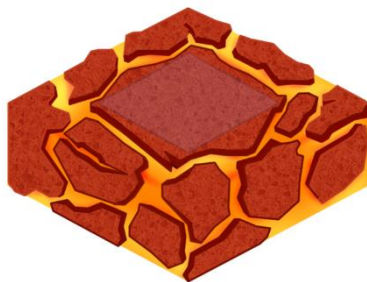


Figure 20: Third tile: LavaTile (Hai Lam Dang, 2022)

The most well-known element is certainly fire and what better to represent fire surface than lava itself. LavaTile was a tile our team wanted from the beginning. For me personally, this tile was the one I had the most fun in making. I was allowed to experiment with not only textures but also the different layers' effects in the program like Glow, Shine, Darken, etc. I liked the result a lot: the magma glows beautifully in contrast to the dark red rocks.

## 4. Miscellaneous

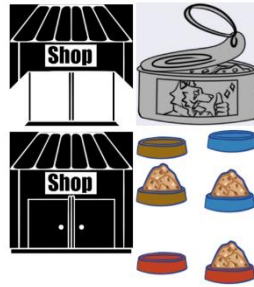


Figure 21: Shop icons, tin can of food, and food bowls (Hai Lam Dang, 2022)

In the earlier version of the game, we only had one icon for the shop. It was Timur's suggestion that we should make two icons for the state of the shop: open and close. This would help the player to see if the shop is open or closed. The icons had a very simple open and closed door. If the shop was currently open, the icon will show opened doors. If the shop was closed, the icon showed closed doors.

During our playtest, someone suggested adding a speedup function to our game. We thought of a way to represent that function in the game. The first idea was an enhancement drug but it had too much of a tonal clash. In an earlier design of the TreeTile, there was a food bowl within the sprite already. So we thought „Why don't we just use food instead? Animals grow faster if they can have a healthy diet.“ So I removed the bowl in the old design of the TreeTile and turned it into a standalone sprite. Each type of tile has its bowl with the corresponding color. In the shop, the player can buy a tin can of food and fill the bowl up. It was a good visual identification if a tile is having this speedup by having a filled bowl. A tile with an empty bowl meant the monster's growth duration was the standard duration.

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## 7. Sources

Rietz, Martin: Blue Lava at Kawah Ijen volcano, Indonesia

(<https://blogs.egu.eu/divisions/gmpv/2021/06/30/a-lava-for-almost-every-colour>) (Last referenced: 23.01.2022)

Scarff, Oli: Flying Pig Recreates Pink Floyd Album Cover

(<https://www.gettyimages.de/detail/nachrichtenfoto/an-inflatable-pig-flies-above-battersea-power-station-nachrichtenfoto/126589511>) (Last referenced: 23.01.2022)