



FINAL DESIGN PROJECT FOR EXHIBITION

FSF104 Object Design

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I. My 10 Favourite Games

1. POKÉMON GO

- Studio/Developer: Niantic
- Platform: iOS, Android
- Publisher: Niantic
- Release Year: 6 July 2016
- Game genre: Augmented reality game



Fig. 1. Anniversary Image - Happy Sixth Anniversary Pokémon GO!

I like it because I can play it wherever I want. Game play about catch and train for Pokémon which does require much time. I enjoy catch and collect Pokémon for my collection. The main idea of this game is catch them all, add the new Pokémon or new version of the Pokémon you already have in your collection is something really addicted.

2. LEAGUE OF LEGENDS

- Studio/Developer: Riot Games
- Platform: GeForce Now, Microsoft Windows, macOS, Mac operating systems
- Publisher: Riot Games
- Release Year: 2009
- Game genre: MOBA, Team-based strategy game

It about team fight between 10 players with each player have different champion, roles, abilities, and build. Player can build their champion with their own build which can the

champion gameplay or role a lot. There are over 100 champions to choose as well as each champion have several different items build which can create really great experience.



Fig. 2. Jinx Yasuo Lux Blitzcrank from League of Legend

3. DISTYLE

- Studio/Developer: Lilith Games
- Platform: iOS, Android, Microsoft Windows, Mac OS
- Publisher: Lilith Games, FARLIGHT
- Release Year: 10 May 2022
- Game genre: Turn base, action role-playing game, strategy



Fig. 3. Distyle Background

Turn play game with 5 different units in each side. There are many different roles and team build. There are 70 different units in the game, player can decide to build a team around 1 unit or many other unique ways to create a team.

4. POKÉMON: SWORD AND SHIELD

- Studio/Developer: Game Freak
- Platform: Nintendo Switch
- Publisher: Nintendo, The Pokémon Company, Nintendo of America Inc.
- Release Year: 15 November 2019
- Game genre: Role Playing Games



Fig. 4. Pokémon Sword and Shield Cover

I like Pokémon. This game simply good for Pokémon fan. The things good about this game is combat systems and art. This game was the first 3D Pokémon game which gave so much hype to me. Even though the final animations and Pokémon 3D did not look as good as expect it still really good game.

5. LEAGUE OF LEGEND (TEAMFIGHT TACTICS)

- Studio/Developer: AutoChess Moba, Drod Studio, Chengdu Longyuan Network Technology Co., Ltd.
- Platform: PlayStation 5, Nintendo Switch, PlayStation 4, iOS, Android, Microsoft Windows
- Publisher: Drod Studio
- Release Year: 18 April 2019
- Game genre: Strategy

Auto chess also a turn base where player play with 9 other players. Different to other turn base games, players can only decide location, items, clans, and class. Player can upgrade

their champion by fusing the same units. Good thing about this game required quite a lot of knowledge about the game as well as when they need to upgrade their overall team.



Fig. 5. League of legend (Teamfight Tactics) Wall Paper

6. DEAD CELLS

- Studio/Developer: Motion Twin, Motion Twin Scop ARL
- Platform: PC, iOS, Android
- Publisher: Motion Twin, Playdigious, Merge Game
- Release Year: 10 May 2017
- Game genre: roguelike, Metroidvania



Fig. 6. Dead Cells Wall Paper

7. SOUL KNIGHT

- Studio/Developer: ChillyRoom, Zeyang Li
- Platform: Android, iOS, Nintendo Switch
- Publisher: Zeyang Li, ChillyRoom,
- Release Year: 17 February 2017
- Game genre: Roguelike



Fig. 7. Soul Knight Game

8. THE LEGEND OF ZELDA BREATH OF THE WILD

- Studio/Developer: Nintendo Entertainment Planning & Development
- Platform: Nintendo Switch, Wii U
- Publisher: Nintendo Entertainment Planning & Development
- Release Year: 3 March 2017
- Game genre: Adventure game, Action role-playing game



Fig. 8. The Legend of Zelda Breath of the wild wall paper

9. GENSHIN IMPACT

- Studio/Developer: miHoYo, Shanghai Miha Touring Film Technology Co., Ltd.
- Platform: GeForce Now, PlayStation 4, PlayStation 5, Android, Microsoft Windows, IOS
- Publisher: miHoYo
- Release Year: 28 Sep 2020
- Game genre: Adventure game, Action role-playing game, open world



Fig. 9. Genshin Impact Image

10. LEAGUE OF LEGEND: WILD RIFT

- Studio/Developer: Riot Games
- Platform: GeForce Now, Microsoft Windows, macOS, Mac operating systems
- Publisher: Riot Games
- Release Year: 2009
- Game genre: MOBA, Team-based strategy game



Fig. 10. League of Legend Wild rift - Nautilus image

11. In conclusion

I like to turn base type of game which require team or hero building. It allowed me to create many different types of strategies or game play. Wild rift is the only game I play with combat/ team fight is main feature. Normally there are many things that can impacts the game, mainly is the way player build their team, which are really interested in me.

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II. Interfaces in Games

1. Ideas for the game interface

My game will be about a turn-based strategic game with chess mechanics where the player can move around in a hexagon block and fight other enemies using magic cards. To do this, I want to have a really basic interface and simple concept. There might be a cut scene to introduce the world in this game as well as a quick fight against other enemies. There will be 3 main features in this game such as summon (where the player can get more cards), battles (will happen in a small map with multiple hexagon blocks as paths to move around), and all other features around magic cards will all be in the player's desk where they can design their desk card, level up or delete their card.

I wanted the player to enjoy and feel satisfied while playing my game, by giving them a hard challenge which needs several tries to win the fight against enemies. I want my game to be basic so that everyone knows what to do while they play.

My game will not have any moving controls; the player needs to click to play what they want to do. During the battle, there will be 3 options for the player such as move, cards (used to fight) and skip. There will not be a timing for each turn so the player can take time to think about their movement. To use the card, the player needs to select the card then tap or click to where they want to use them.

About motion, there will not be moving keys such as W, A, S, D; during the main menu the player needs to tap or use their mouse to click to select options or move. During the fight, the player needs to select a move option in order to move.

My basic Interface/ Battle scenes will look something like this:

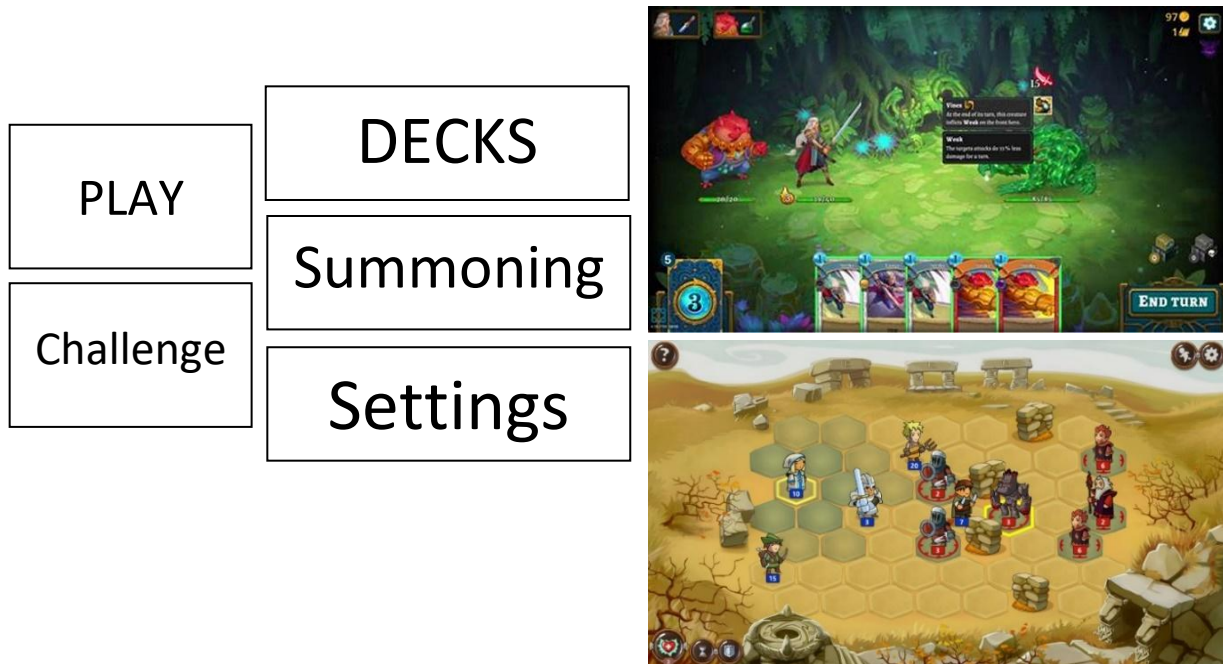


Fig. 11. Turn base game image 1

My game got inspire a lot from other game with similar mechanic. Chess mechanic, turn base, strategic. These game normally will have really basic interface with some general feature such as card/ minion stats, their elements (if have), their current health and other stat. During the match or fighting scene, there will be other information such as time limit for each side, their current states, players' turn, enemies' states, as well as several functions depend on kind of game such as total enemies, players desk, items.



Fig. 12. Turn base game image 2

Turn base game in general also have some specific feature that other game may not have. For example, can be list as auto fight, quick battle (which will run a fake battle depend on player team chance to win a battle while play in auto fight). Speed up, which will speed up the overall game play, in turn base game this can be a good feature where player can speed up the animation, fighting scene and unnecessary animation.

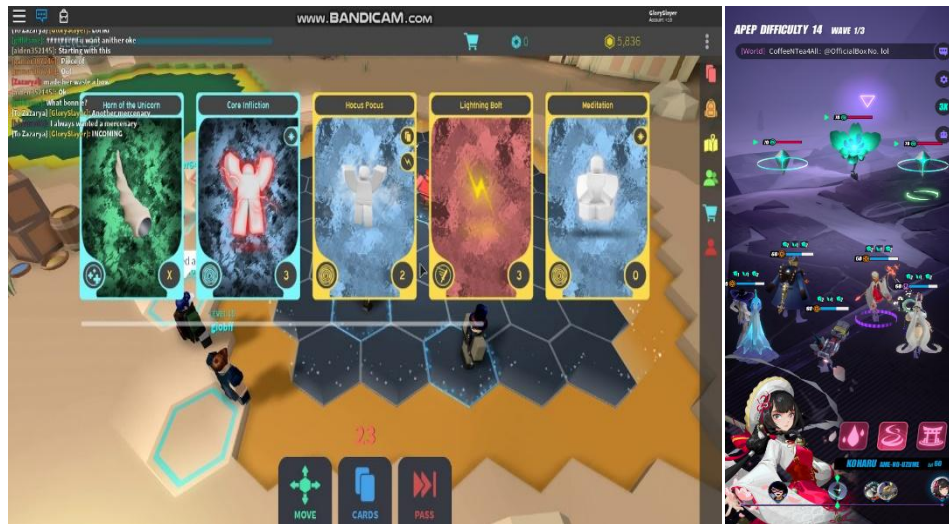


Fig. 13. Turn base game image 3

Some games have auto fight is main machinic such Auto Chess (League of Legend), where the only way player can affect to the fight is the location of the character, items used on these characters, level (star) of the character. Which is about luck more than strategy. For example, in league of legend auto chess, everything is random from the character player will get, items drop from enemies and skills used by their minions. In this game, player can only decide where to put their minions, item on them, their location and main class. So, the item and character the player got will affect a lot to their play style, their strategy.

If the game requires complicated movements and skill to play, it is not necessary to have complicated menu and interface. Main things about my game will be fighting using card and strategy around it, I see it is not needed to add other feature if it not necessary, I will make my game as basic as possible.

2. Disadvantages of interface used in games

I had many turns base game with similar concept and idea but some of them might have several disadvantages. Firstly, will be the main game menu where game usually show a lot of

things together (quests, gifts, new features, new events, discounts, etc...). Which might cause several problems for new players.

Secondly, auto fights and quick battle sometimes will waste certain number of materials and times of the players. It helps them save time but according to several game I played before, when I used auto fight the bot will always using the ultimate of the characters or minions first whatever it is damaged skill or healing. For example, In Distyle the bot will automatic use the ultimate of the character if it not on cooldown so even though all the characters and minions in the battle still full health, the bot will always be using ultimate of the character (healing), which will waste the ultimate and might cause the loss of the fight. This can also count for buff ultimate or debuff ultimate, the bot cannot recognise if the character on the fields has buff/ Debuff/ buff-locked or not, they are not as smart as actual player so the probability to player to win the game while both 2 team have the same level is small.

3. Linking to my Theme

Are there any ideas you have mentioned that could be applied to the design element of interface?

My theme is about medieval world, so I want everything, everything feature need to be basic and easy to understand. The overall interface needs to have an ancient, medieval theme. For example, instead of normal “Play” button, I will add stone texture for that button to look like a ring or a magic item that start the battle.

About design element of the interface, I will use icons, colours, typography, items and background that related to medieval or magic theme. The interface I want to create will have a drawing or image in the background that about card + magic theme. About design element of the image, it will have proportion as the main element design and other details, auxiliary design such emphasis, unity, movements, etc...



Fig. 14. Turn base game image 4

How might these be applied to video game interfaces? What about to mobile games specifically?

Right now, I want to complete my game on computer version first. To done this I will basically create a theme will some specific colours related to my theme.

- For example, if the first chapter of this game start at the forest, the main colour for the image will be green, colours of the button will be green or brown and the colour of the writing will be purple or cyan which represent for magic. If the button colour is green, I will add lead texture or add some vines details, on the other hand if the button colour is brown, I will add old wood texture.

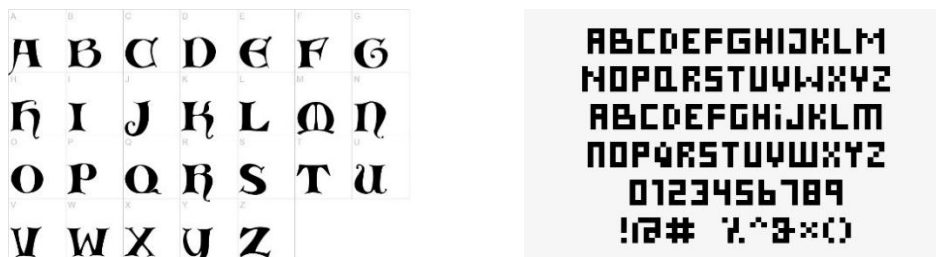


Fig. 15. Font will be used in my game

- The typography will look like medieval handwriting shape. Or I will create a pixel version of these words.
- I also think about design the button look similar to magic card because it is the main thing about this game. Because in this game user need to use card to do anything so it is understandable if I design option section look similar to the magic card.

Applying your understanding to games from your earlier Object Design theme's idea exploration:

Minecraft: My ideal interface looks alike minecart interface with a picture in the background that represent the overall game theme.

As you can see in the picture, Mojang used different type of typography for their game name which attract players in the first look. They seem to use basic 3D world with stone texture for their game which the creeper face (which is popular mob in the game). For their other section, they used similar colour with no texture. In other version, this game will have different section, extra option that support different devices.



Fig. 16. Game interface inspiration

Because this game has many different biomes, and they add new version with new biome frequently so the image in the background will change depend on the main theme of the version. Such as Nether, Ocean, Deep Cave as following pictures



Fig. 17. Nether, Ocean and Deep Cave

As you can see for different update or version, they will add different texture that represent for the theme of the version. Player can easily see what is new in the game or if there are any next biome just by look at the main menu interface. In one image, Mojang basically show the overall biome with most of creatures inside those biomes.



Fig. 18. Game Interface Example

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III. Audio in Games

1. Audio Design:

[Extra Credits: Video Game Music](#)

According to the video, music in video games has changed a lot in the last few decades. In the past, unlike nowadays there are many supports tune, auto tune or advantaged tune box, they were forced to use basic chord, melodies within 3 notes in order to create sound effects and melodies for the game. This turn out to be ab advantage because melodies, good melodies with last longer in players head, strong melodies make it more memorable. On the other hand, game makers nowadays can access music, chorus music more easily. With tons of talented musician, music in video games today not only use for sounds effects or melodies in one specifies round. Music in video game can create an effect that helps player to related to their game, their location, to the character they are controlled.

The Sound Design of Overwatch

- Three Sound Design Concepts:
 - Create Reality
 - Convey Information
 - Incite Emotion
- Three Video Game Sound Designs:
 - Programmatic

The sounds effects or music in the game need to be big and flexible enough to handle the entire game content. Basically, this means the more complex of the game the sounder effects and songs game must have to handle the contents. For example, in PONG game, at least 5 different sounds:

- | | |
|----------------------|----------------|
| 1. Game Start | 4. Point Score |
| 2. Ball Hits Paddles | 5. Game Over |
| 3. Ball Hits Wall | |

- Context Sensitive

Context Sensitive basically is sound effects that can impact to players experience with the game. For example, when you are playing fighting game and 2 weapons making impacts to others, player should hear the sound of two metal objects colliding or a sound or a metallic object vibrating.

- Information Dense

In this section, it will be including Music, Dialogues, Sound Effects, Atmosphere Sounds. In fast paced game, player need to know what is going on in the game. For example: battle royal game usually has limited zone that forced player to move to certain area. They normally have an alarm sounds to signal players that the safe zone getting smaller.

2. Music and Sounds effects in Video Game

Genshin Impact

This is an RPG open world game. Players are able to control 1 in 4 characters in the game. They can switch between character really quick in order to combine abilities, elements and create multiple different combination and attack technique.



Fig. 20. Genshin impact wall paper

In this game there are 4 different nation at the time this article was made, each nation in game got inspiration by country or continent in real world. So, the characters design, houses, buildings, nation animals in each nation are also different and will related to their nation at some point. Different nations represent for different country and each of them have different main theme.

Based on Germany and Western in general. This area call City of Wind. Music in this area normal have claim music type with wild, wind effects. Main theme of this area is freedom, wind. Melodies in this area normal made by using piano, guitar, western instruments.



Fig. 21. **MONSTARD**

Based on ancient China. Everything in this nation clearly related to China. Most of song, sounds, theme music's on this nation are made by using [China's music instrument](#) such as flute, Chinese two-stringed fiddle, etc.



Fig. 22. **LIYUE**

Fig. 23. **INAZUMA**

Represent for Japanese, this nation's main theme is based on Japanese music. Most of melodies, theme music in this area created using Japanese instrument and player can easily tell the different to other nation in the game. The music in this area sound like typical Japanese song which cannot be confused to Chinese or Korea songs.

Fig. 24. **SUMERU**

This nation based on Indian and Middle East in general. This is the largest nation in the game with several different biome. In each biome have their own melodies or songs that related to them.

Overall, this is an Open World game, which require players to explore and solve puzzles but because there are many different places, nation, with multiple biomes. Music in this gam not only use to create the theme for the game but also use to help players feel more related to the area they are exploring. Without music, exploring in this game seems less interested in.

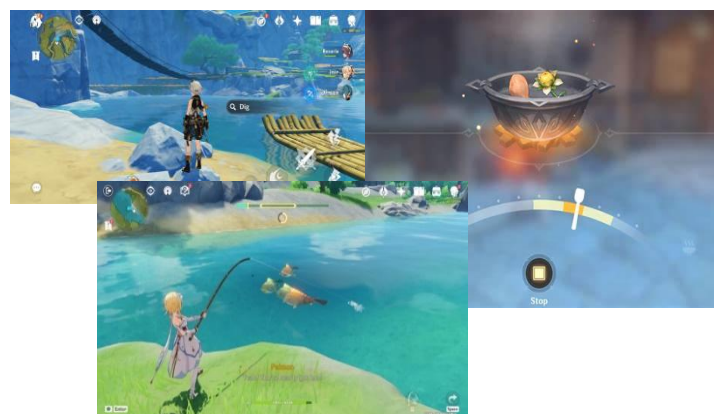


Fig. 25. Sound effect example

This game Music/ Sound had all 3 different type of music design:

Programmatic: As an open world game with a lot of things to do on the map, there are many different lines, sounds effects for different objects that players can interact. For example, different type of chest with different values will have different sounds effects. Others sound when player interact with enemies or NPC are different to the menu section sounds effects.

Context Sensitive: The designer for this game focusses a lot on context sensitive. Everything in this game that player can interact have their own sound. In the action, when normal attack land on enemies, depend on what type of weapons will have different sounds as well. Also, with different type of enemies like robots or metal enemies there will have different sound with other enemies. Another example can be list as:

- Sound when players burn grass
- Sound when players froze things
- Sound when players attack enemies
- Sound when players open the door
- Sound when players cooking
- Sound when players attack other NPC
- Sound when players stay close to fire sources
- Sound when players cooking
- Sound when characters death/ join party/ attack/using skill/ using ultimate.

Information Dense: As I said above, there are multiple themes, songs depend on the nation or biome players at. For each nation, there will be different OST, Disc. In each different nation or biome, there will be at least have 3 type of song:

- **Adventure theme, melodies:** When players explore around
 - Have slow, memorable melodies
 - Normally will be relax or really claim song that represent for the nation/ biome
 - Usually played by music instruments of the country the nation based on.
- **Battle theme:** When players start the battle in the open world or inside domain
 - Fast beat, fast-paced, continuation.
 - Also using music instrument of the country, the nation based on.
- **Solving puzzles:** While player solving puzzles
 - Sometimes have similar song while adventure
 - Also have relax and claim music that help player to focus on the puzzle.

Describing the effect of the features/choices you have identified on the user's experience of the game.

This game has really great amount of song as well as the quality is always good. In this game music like a main feature that help introduce the new place to players. For each song played, it helps players to know more about the theme and the place they at. Players can feel the area in the game through the song. Music used in combat also help player recognize the tempo of the game. In general, the combat song always started with fast paced and continuous a minute then slowly decrease the flow and beat down, which really help in combat experience.

In adventure, music and sounds effects help a lot in world building. Everything in the game have sounds effects and can interact. Music play in the city, town and in wild area is different and all of them just give the vibe of the nation they based on. Player normal will just walk around looking at the view and listen to music while exploring area around.

Comparing the features/choices made by the designer with alternatives to justify why their choices are appropriate for the game.

By using suitable melodies, theme, songs in right places, situations it created an illusion that players actually are the character not just the one who control the character. Because the main features of this game are collecting characters, fight using team of 4 and exploring so not just music and sounds effects impact player's experiences but also the voice lines of characters. In this game, each characters no matters rarity has multiple different types of voice line from events in the game, actions, stories about themselves to their ideas about other characters also.

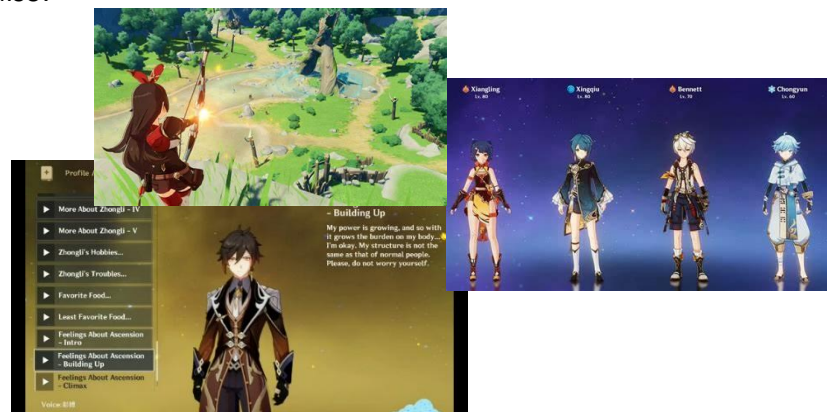


Fig. 26. Sound features example

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IV. Games ideas / Basic Design

1. My Game Name: **TARJETAS**

Until now almost the end of term two, I have not decided my game name yet. I had known very well what its about, theme, and story but not its name. In the beginning, I thought about some name that similar to others game I got inspired from like “Hexaria”, “Mediacrard”, etc..., but right now my game is different from the beginning, it has turned in a different direction with my origin idea.

I decided to name it “Tarjetas” which mean card in Spanish. I think it sound unique and suit to my game. I considered about “ Tarjecard” which is just combined between the word card and card.



Fig. 27. Fonts example

Choosing font for this also took me a lot of time, especial when I created on pixel art. I came up with 4 different font that really catch my attention. These fonts just come up when I typed random world like magic, medieval or “Jaqueline” my friend’s name. [Reference](#)

2. First Sketch

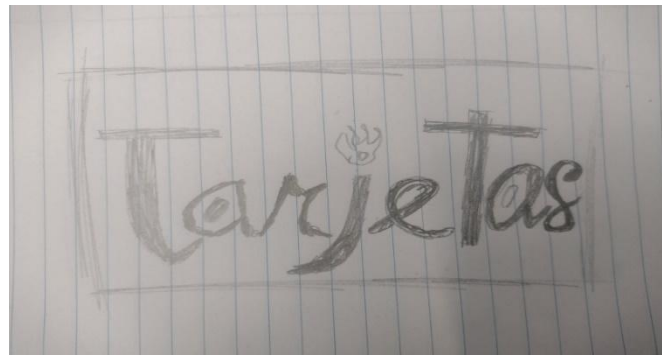


Fig. 28. First sketch for my game's name

I am not too good at drawing at all, but this will not be a final design. I will add texture and another object around to create the main menu. The background can also move around.



Fig. 29. First sketch for my game's interface

3. Final Result

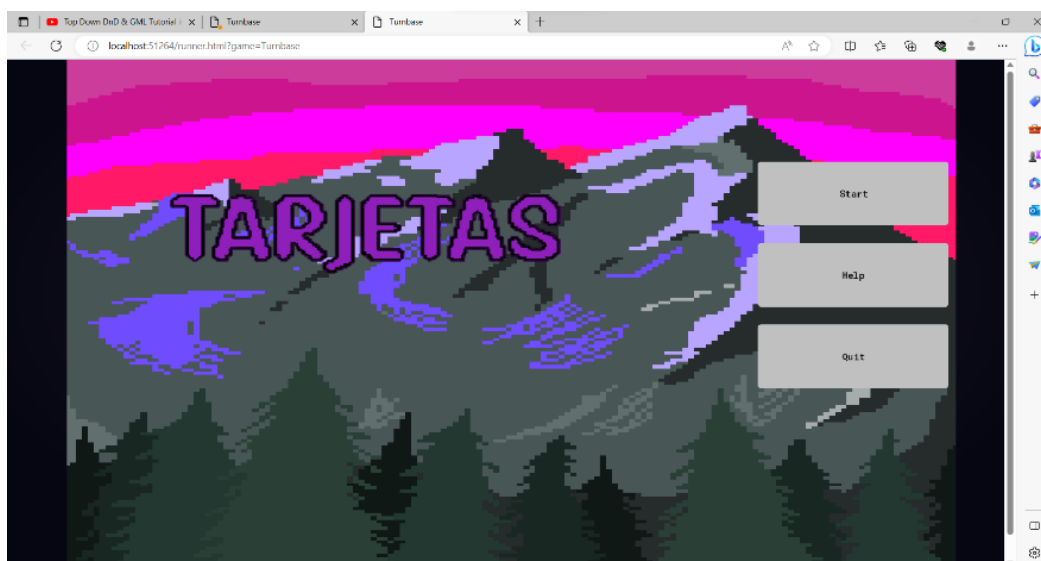


Fig. 30. Final game interface

V. Game Designing

So far, I already imaged what the theme, world building and characters that might appeared in my game. It will be a medieval fantasy world, which mean the enemy and challenged that main characters will face with not only for monsters but can also from the other human, races. Many things might be change in the future, since I constantly adding content for my journal as well as my game until the last 2 weeks of the due.

1. Enemy Design

Enemy Art Design

Some inspiration picture of the enemy that might appeared in the game.



Fig. 31. Enemy Design Example

Enemy in the medieval fantasy word have to including straight looking enemy but on the other hand should have some basic enemies that well known to player such as slime, skeleton or orc. There still a lot of enemies I will not including here but already in the game because there is not much space to add all pictures at one.

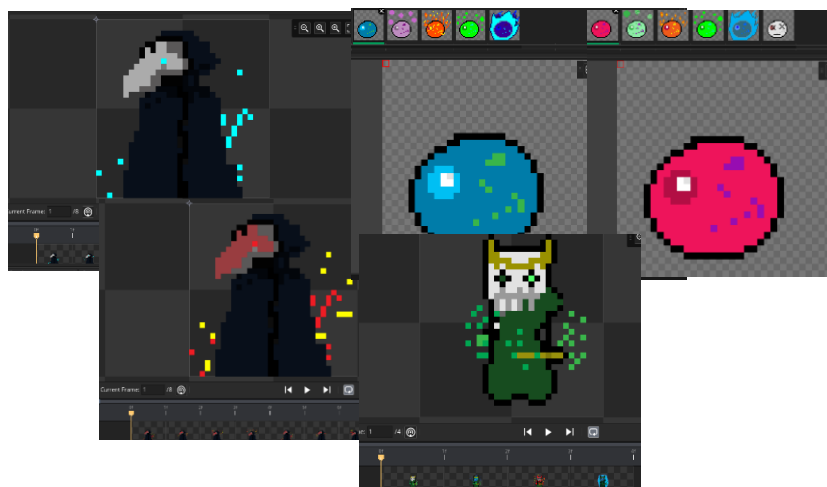


Fig. 32. Enemy Final Design

Enemy Attacking Feature

Due to lack of time and coding experience it took longer than I expected to complete all the basic feature I want to add in my game. As the consequence is I could not create more enemy/ map with special abilities or skills. Currently most of the enemy is basically just have certain of hit point, moving toward enemy and attack if in range. Some special enemy I had create as follows.



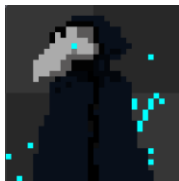
Name: Muk

Distinctive characteristics: Only have 1-5 HP which make this type of mod instantly die after any attack player use on them. But usually there are many different individuals.



Name: Muk Boss

Distinctive characteristics: Basically, a Muk but have higher HP, damage and can teleport. Hard for player to deal with this type of enemy since they can instantly follow player even when they are using teleport spell.



Name: Ryder Walker

Distinctive characteristics: The sprite/ art use for this enemy is from my friend who also had help a lot for Game Design section(music/arts). This enemy basically can only be damaged by ember. Which will take 15-25 turn to die, in the time player only choice is run away.

2. Game Background Design

The main theme of game will be in the mediaeval fantasy world, most of fighting scene or map will happened in the wild area such as forest, delta, cliff, or dungeon. So far, I had most of the map done, I planned to add 3 more map which is one about dungeon(cave), one about undead theme can be a grave, or another dungeon and the last one will be a final boss fight which provide player much stronger card. "This is all idea in my head so far as I only have a few weeks left to finish".

3. Music and Sound effect Design

So far, I have 3 music themes, one for main menu, one for battle room, and one for select map room. I will add several more which is about dungeon song or any type of song that might fit to my game theme. There's a lot of song that sound really catchy, but it does not fit well in my game theme, (which is slow, melodies with slow beat and maybe including some traditional musical instrument.

About sound effect, currently there's only several sound effects for moving, card sound effect such as poisoned, burned or frozen. I believe my game will look more complete with several sounder effects like taking damaged, got defeated or win/lose.

4. Attacking feature/ Card Design

This game basically using card to attack enemies in order to win the battle, so the card function have to be special or have a lot of features/used to each card. Due to lack of time since I had a lot of trouble with coding and design part. There are only 8 cards in the game, but some card will have special abilities or stronger against some specific types of enemies.

5. References

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- Bing.com. (2023). Available at: <https://th.bing.com/th/id/R.de526593600c52438f154d1cccc31ff6?rik=trdvRsf1c8Lzyg&riu=http%3a%2f%2fpixelartmaker-data-78746291193.nyc3.digitaloceanspaces.com%2fimage%2f597c32b44356888.png&ehk=ZCn5mRC02VCdkTVhMJkuHwurTgSAVIFoWJ4PLYINYQk%3d&risl=&pid=ImgRaw&r=0> [Accessed 31 Jul. 2023].
- Soundtrap.com. (2019). *Soundtrap - Make music online*. [online] Available at: <https://www.soundtrap.com>.

VI. Game Function

This topic will cover several things about my game function and adding comment for how the code run in the game. It will just a drawing showing clearly which Objects-Scripts-Code will run first. This will help me if I want to add more thing or update it in the future or other to understand how my code work.

Notes: This is the first years I ever use Game Maker Studio 2 and my type of game does not have much tutorial on my code, most of the function was figured out by me, with the support from teachers and friends.

1. Attack Card Function

This is a basic concept of my attacking feature. Basically, just identify the card player selected -> Enemy that player clicked -> Deal damage and changing sprite (if have).

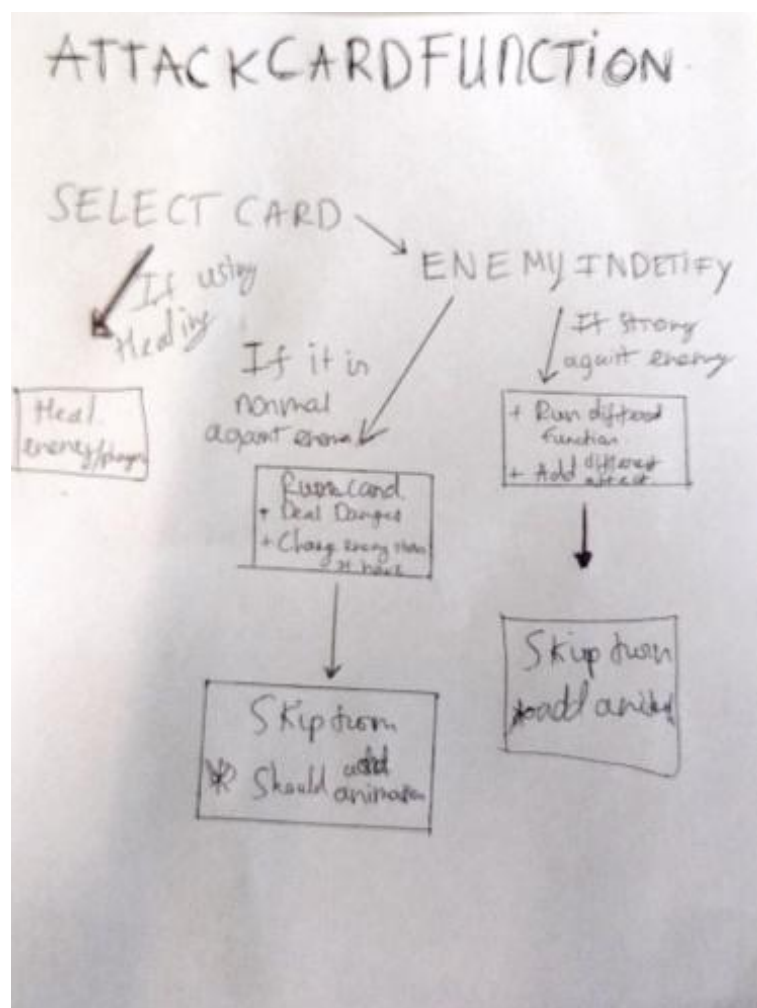


Fig. 33. Player Attach Card Draft

2. Turn Feature

This is both Enemy and Player attacking. Also, with some specific type of enemies some card will deal extra dmg or special feature. With enemy they basically deal damage player if in range.

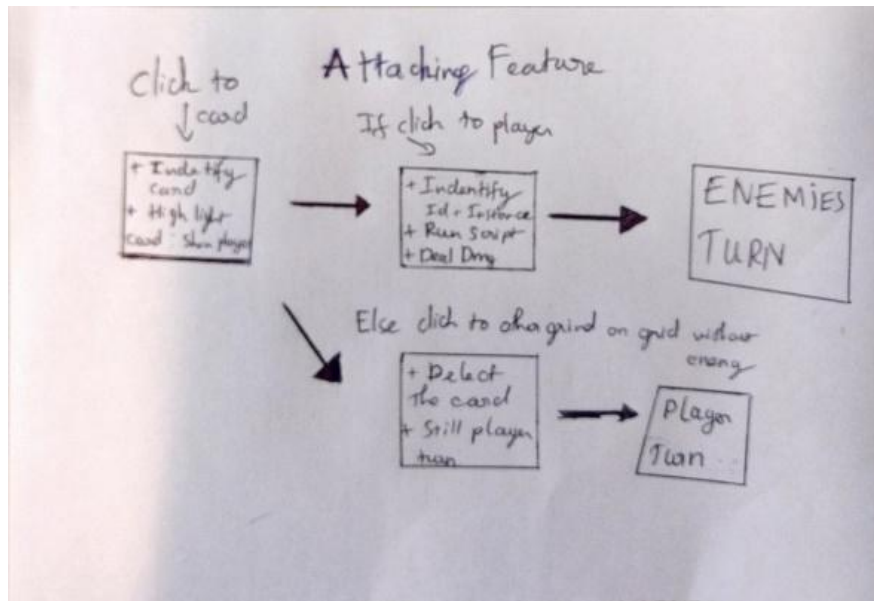


Fig. 34. Player/Enemy Attacking Feature Draft

3. Battle Start/End

By using global variable to check enemy total and player health. If player heal is smaller and equal 0 => Lose. If Enemy total equal zero, Player win.

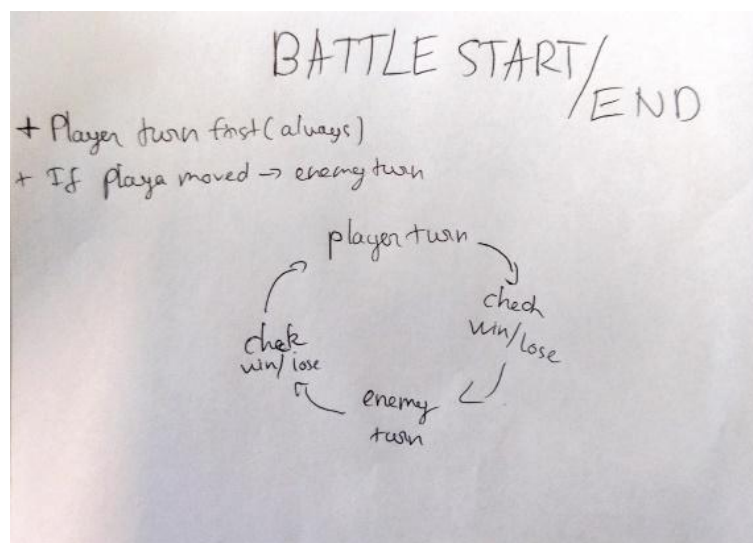


Fig. 35. Turn Base Feature Draft

4. Enemy AI

Enemy have two options. Either move toward player if not in range or attack player if in range. In order to balance out the game, most of enemy have higher range than player so they can chase and attack player most of the time.

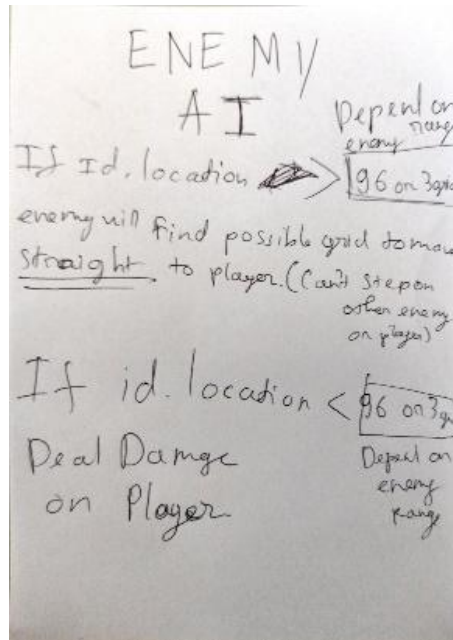


Fig. 36. Enemy AI Draft

5. Player Movement

Player can move everywhere within two grids. It will count as one turn since player is way too overpower compared to enemy in early stages.

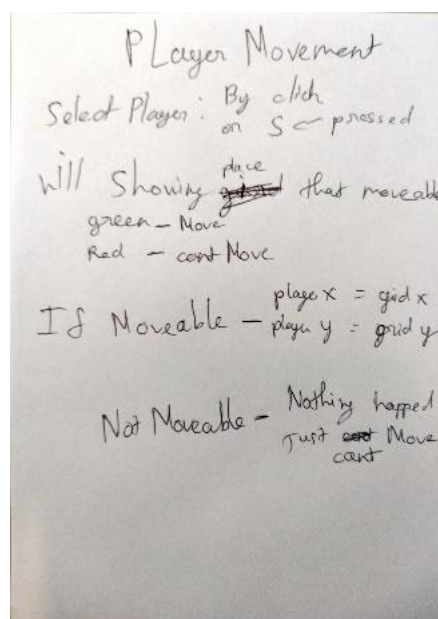


Fig. 37. Player Movement Draft

VII. Game Development Progress

Throughout the year, there was a lot of change in my game art style, game feature and the way it designs. This section will show and compare the different between the early game version to the last saved project on (13/09/2023).

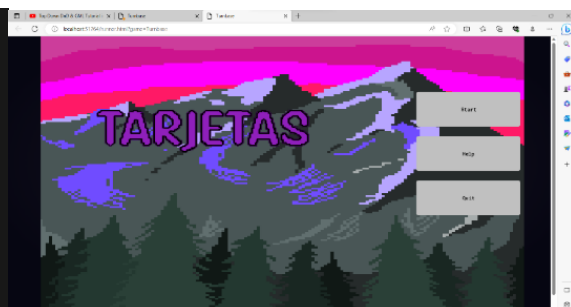
1. Game Art

The left side was the very early version of my game when it only feature is player moving around on grid. Since the beginning my idea for the interface is an environment background high quality art with several option on the side and the name of my game. My ideal idea is the background in the back can moving side to side which is inspired by several game I had played before such as Minecraft or Pokémon. The new picture background was from other student from Object Design 2 name: Ryder Walker

Early version



Final Project



There is a lot of different between to picture as the one on the right is after I finished all the main function of my game with a big health bar, several option for player to mute music and a better way to display current turn. A design cursor instead of the normal one. There is also enemy animation which cannot be show by screen shot. Also, there is a swap button to swap between 4 others card. I also change from showing my game on google tab to the individual screen which make it look more like a app game instead of web game.

Early version



Final Project

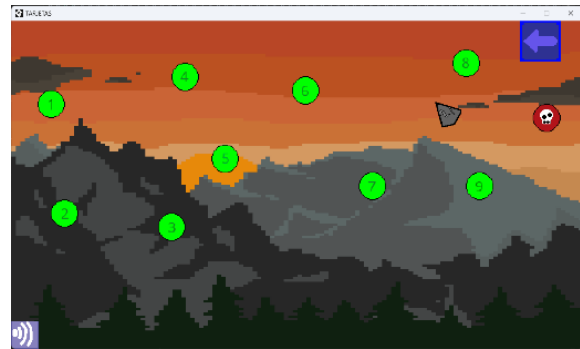


This is the main game page with several room with difficulty proportional to the number of the room. The old picture was quite lack of detail as well as not fully attract player, which I changed to the new one with similar colour used, similar place but the final picture is more details and pixels. The old art was reuse to one of my game stages. Both pictures were from Ryder Walker.

Early version



Final Project

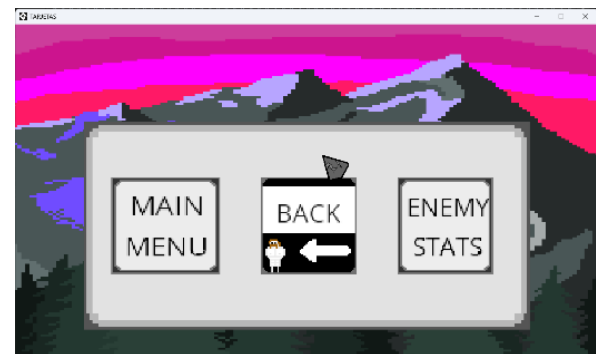


In the past, both 3 option will bring player back to main screen which is the screen player will see when they first start the game. This menu is not much but currently it can be use to see enemies basic stats, go back to main screen and go back to the room player stayed before. I also try to re colour all 3 button to make it suit with the main menu colour theme.

Early version



Final Project



As the time goes, I had more and more experience in pixel art as well as colour use. The enemy's design is the best way to show how it have been improving. In the very begin slime, skeleton and other small enemy is a first thing on in my mind as they are basic and suitable for beginner, and over time enemy will have more abilities, shapes, skills.



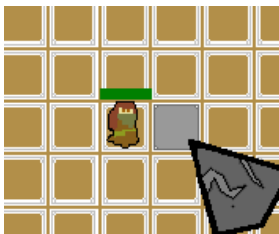
Early version



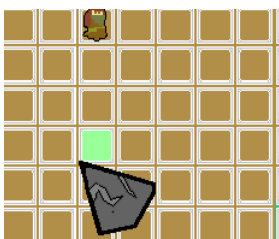
Final Project

2. Game Function

This section will focus on why I added those features for my game instead of comparing it with the older version. Most of the feature in this game is to support player to play or understand it as the turn base type of game with chess like mechanic is not popular or easy for new player to getting familiar with.



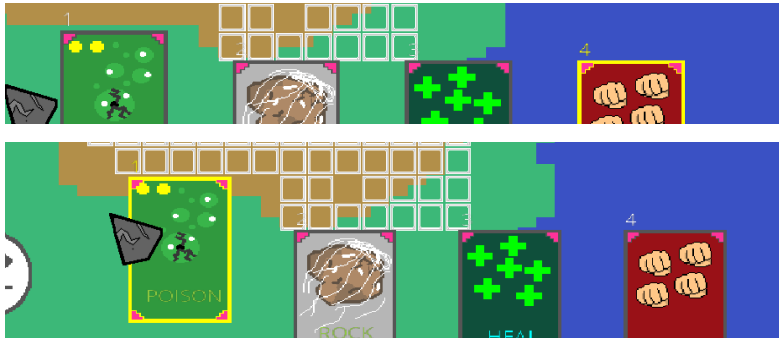
When Player is not select to any card or player. In rest stage not moving or attacking the grid the cursor hover on will getting darker colour just to show player the grid they currently hover on.



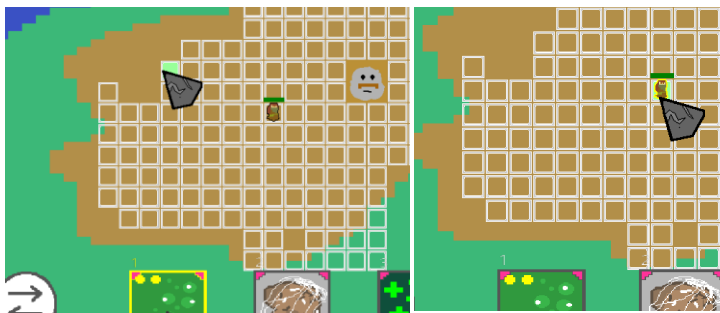
Green is showing that player can move on this grid or the attack is in range to use. But this feature is not perfect since it faced two main problems, first on is that when select player to move to one grid that have enemy stay on it the hover still showing green even though player cannot move on it. Secondly is when some attack does not have any affect to player the hover still showing green.



Red showing that player move/ attack is out of range. This work perfectly since it does not have any similar issues through out the testing part.



In the card section, there is two feature that make the game pace a bit faster which is quick select with shortcut keyboard and hover and highlight card when select. Which help player see what card they currently select.



Also, when player selects a card, the character will deselect her self from moving to separate the moving feature and attacking feature. Because in several past version, there was a bug that show the range of the previous card player selected instead of player moving range when player moving.

VIII. Ideas/features change

1. Old art design

This section will show my old enemies design, cards, button that could not make it to the final project due to several problem.

Changing Colour Slime: At first my plan was creating a slime enemy that will randomize colour in every new map or when player restart game. Which a bit different in design and have simpler look. In the end, it will just two different slimes with blue and red, each have different hp scale, damage.

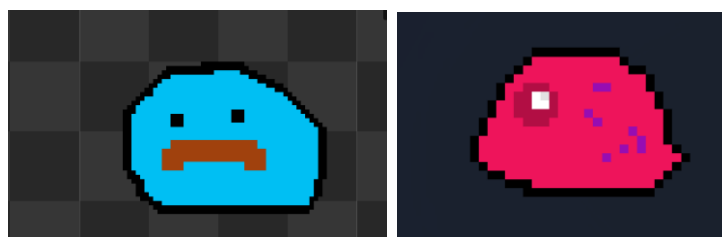


Fig. 38. Slime old designs

Big Moustache: This enemy does not have a name yet, but its original creator (Ryder Walker) named him “Big Moustache”. I did not have much time to turn him into an enemy object. He supposes to be a range enemy that shooting slime enemy into player that have chance to create a actual slime enemy. I duplicated and used his sprite for my losing window.



Allies Golem: This is an ally's object which got summon from summon card (this card did not make it to the end). Due to lack of time, I decided to not add the summoning feature for my game and as the result this golem could not appear in the final project. The summon card got change to dice/bow card which shooting random effect at enemy.

Card Design: These two are my old card design, these two cards were from Ryder Walker, but the overall look of the card design just does not fit with my overall background/game design. The thief card is a great idea as I planned to make it able to steal enemy health or swap player and enemy position. It can also be a great summon ally.



2. Features not be able to add in

There is a lot of features that I wanted to add into my game. As a turn base game, the game pace is really slow that might bore player, some features added in to make the game pace a bit faster such as speed up, skip turn or auto play. But in my case, the features I want to add are to help the player during the game as well as to attract them to the battle.

Damage pop-up: This is also one of the main features I would like to have for my game as I could not showing the stat of the enemy while the battle is continue. Pop-up Damage is a great way to attract player into the battle as well as showing how strong the card or enemy are.

Enemy/Player animation: So far, all enemy only have 1 idea animation when they staying and when they got bad effect (poison, burn, frozen) I basically just change the sprite colour. I could not do more animation even though I already created death, attack animation for some

enemy. I could not have enough time and it will take me a fair amount of time to actually merge the animation into my code.

Several animations, I could not add into the game:



Fig. 39. Animations

Showing stat: This is a handy feature that I believe is not that necessary but still need in a turn base like game. My idea is when player hover onto the enemy, card it will show a small window showing how much Health, Damage, its element, current status of the object as well as showing how dangerous the enemy are or how many time the card can be use.

Elemental systems cancel each other out: My idea is that each enemy will have different element of type which is weaken by some specific card. Inspired by Pokemon and other turn base game with similar system I believe this feature is needed for my game. But unfortunately, it took me longer than me expected to finish all the basic feature plus characters, background, music design that fit the theme of my game which is fantasy world.

Draw card system/ Loot Box system: My every first idea of this card system is that player will draw a few cards each turn and using it to fight against enemy. The type of card player can get is random and all the card is 1 time use. Also, it will be a loot box system that allow player to get a stronger/ rarer card. I could not do both of the feature because to do the loot box system it should require a save/load system and with draw card system it is possible, but I could not have enough time to complete it.

IX. Workflow

1. Before Term 3

Today is 19/06/2023, about 2- 3 more weeks until the end of term 2. I currently work on basic feature in my game in order to achieve Minimum Viable Product or MVP. I believe to achieve MVP, I need to complete at least 4 features in the game such as Moving, Attacking, Enemy behave, and UI or user Interface.

Moving in my game is not too complicated. Both player and enemy can move 2 grids in all direction for each turn. If they move, they cannot attack and vice versa. Each grid is 32x32. If player move more than 2 grids, their turn will not count, and they can continue their turn. Enemy will automatically move toward player and choose as close as possible grid to move. Unlike player can get multiple cards with multiple attack range. Enemy can only get 1 – 2 attacks might or might not have different attack range which mean enemy need to move to specific range that player in their attack range to attack.

Attacking is the most complicated feature to do currently because there is too much card I want to add, with different damage, range, require using or effects those attack have.

This game moving and attacking based on grid base, I mean that player not actually attack the enemy but the grid, if they attack the grid without enemy its count as missed and their turn is over, if they attack grid that contain enemy, enemy take damage. Which mean player can missed click and missed their attack, this will not work on enemy because they always get the exact player location (unless they got confused then they randomly use attack on the grid that on their attack range, “this feature has not in the game yet, but I will add it in”).

I got a lot of problems and struggles with coding the attack feature, as it quite complicated to understand all the code sometimes. I planned to complete my attack feature in week 2-3 of term 3. Then spends the rest of this term on creating arts, enemy, map.

My current project is almost completed. If I can complete the attacking features, there are not many things I need to worry about as all I need is creating more map and more challenging enemy.

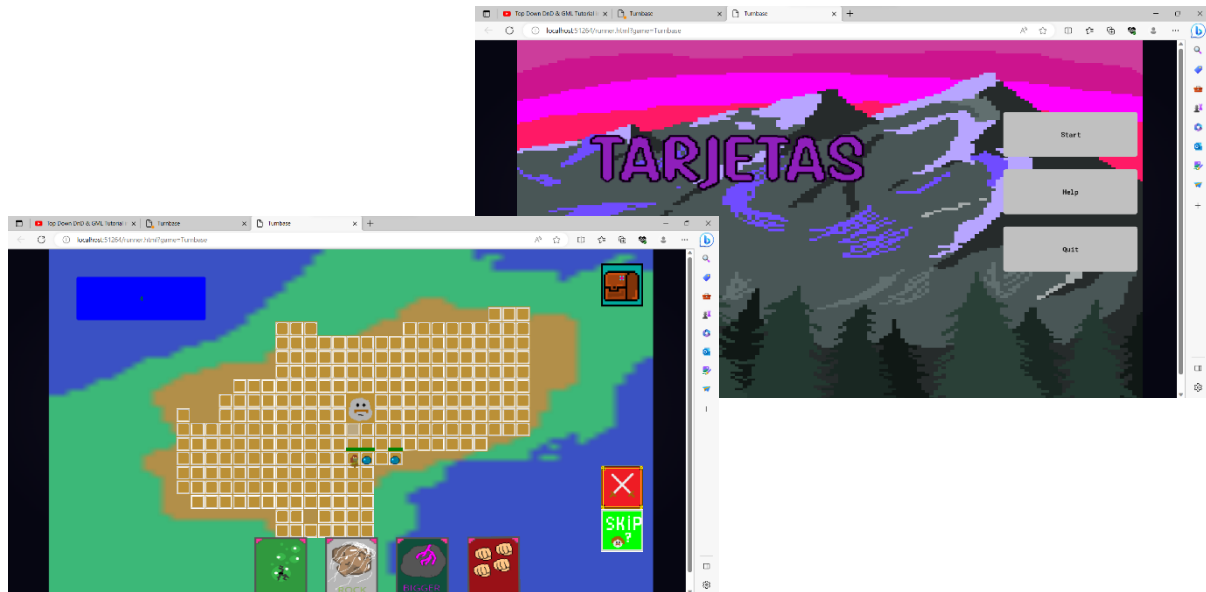


Fig. 40. TARJETAS - Map 1

Today is 05/09/2023, this is the second last week until the due day for my game. So far, all the function/ feature has been complete. There are 2 more problems that I believe I should fix before submits is the animation of the characters and enemy in the game and a bit of the interface showing when and where player can use the card. I added several more room for my game. Right now, total is 5 maps, I will add 3 more before the due day (15/09/2023).



Fig. 41. TARJETAS - Map 2, Select Room, Menu, and Map 4



Fig. 42. TARJETAS - Map 5, Win Window, Map 3, and Lose Window

2. Self-Journaling Term 3

For the first 2 term, I did not focus much on writing journal. So far, my journal just includes several idea of my games, some brief and some assignments about game designing as well as several character basic design. I started writing journal this term to tracking on my working progress as there only less than 2 months to complete and also to fill the rest of the journal book.

Week 1 of Term 3:

24/07/2023(Monday)

During school holiday, I complete the basic game interface which is drawing the card on the screen. The only feature I need to work on to complete my game is attacking and taking damage. I had watched many videos from many sources which gave me a basic idea about how my character and enemy taking damage.

26/07/2023(Wednesday)

I spent this week to worked on my game art style. Mainly because I currently stuck at some points, I believe it's better to try do other things first. My game combat systems are work

quite well now, once it done, all I need is create more stage for players as well as more type of mod or attacking way.

28/07/2023(Friday)

I did not do much this week due to other projects from many others class as well as several midyear exams. I worked on the taking damage system which is work well so far. But there still many struggles with “enemy team” group which is the name for all the alive enemy on the field in my game. With the way my code going, once 1 enemy die, the rest will stop moving and attacking even though they are still alive.

Week 2 of Term 3:

31/07/2023(Monday)

I still stuck at my attacking, taking damaged and death stages which, I have no idea how to do at this point. Most of the time I was tried random method I found on YouTube or GMS2 platform but none of it actually fit my code. I supposed to finish that feature in the end of next weeks which is not that much time left.

02/08/2023(Wednesday)

I supposed to finish my attacking feature this week, but so far, I have not figure it out how to use state machine. I have 2 main problems with this attack feature, first is I do not know how to be checking enemy location, id, due to “enemy team” which is a term I used to group all enemy together. And secondly is after enemy death (run out of hit point) they can still move and attack player.

Today I decided to create several more map and stage. Also, I want to add several more mini game or special stage with different game style.

04/08/2023(Friday)

I Figured it out how to deal damaged on enemy now. Also, I can identify a certain object by searching their id. The only problem I have now is enemy after death. I think about completely delete the enemy after they death, or just hide their appearance and stop their attack and moving function.

Week 3 of Term 3:

07/08/2023(Monday)

I created several more stage, new enemy and new attack feature. So, fat the only attack that's working is punch which have 5 damaged, 32-pixel range or 1 grid. I add a highlight to show player the range of the attack.

09/08/2023(Wednesday)

I did not do anything today, just watching YouTube short.

11/08/2023(Friday)

Today, I am working on enemies' animation, soundtrack for my game as well as several background sprites that look fit with the fantasy theme.

Week 4 of Term 3:

14/08/2023(Monday)

Today I continue to work on my attacking feature. I created a rock throw card today which deal 16 3 damaged and have 127-pixel range or 3 grid. There is a bug that even when the highlight show that player attack is out of range(red), the attack continues instead of pausing.

16/08/2023(Wednesday)

I spent today working on my journal. I had some struggle with my journal currently. As the time passed by, there will be more and more update for my game which caused the version (update I wrote about in the journal) getting old really quickly.

18/08/2023(Friday)

Today I continue on working on my attacking feature, so far, I could figure out how to manage when the attack can be use and when it cannot be use. But turn out the hover feature of the grid got some more errors.

Week 5 of Term 3:

21/08/2023(Monday)

I added two more card today which is poison and burning card. Both have similar feature which is dealing damage over time. While poison slowly kill enemy dealing (-3) per turn and

burning instant deal 8 damage in the same turn and slowly damage enemy (-1) per turn. Both cards have unlimited range since they are magic and can be use on any target on the map.

23/08/2023(Wednesday)

Today I spent time to work on my attacking feature. I had figure it out how to deal dmg on enemy and now it is for enemy attack to deal damage on player.

25/08/2023(Friday)

I spent most of the time today drawing and creating more idea for my card since I got stuck with enemy attacking feature. I already have a clear idea how or when enemy will attack player. If enemy in range and enemy turn = true, enemy attack = true, else enemy moving = true.

Week 6 of Term 3:

28/08/2023(Monday)

During the weekend I spent several times to write down a basic pseudo code to see how can I add the attack feature into the code. I figured it out and enemy so far can attack player if in range. The only problem currently is I cannot decide enemy damage since the code will delete straight to player health with exact number instead of enemy dmg.

30/08/2023(Wednesday)

By using the code `CurrentHp -= dmg;` now I can set enemy dmg and it will count base on enemy dmg.

1/09/2023(Friday)

Today I continued to work on my card. So far, I had plenty of idea of what kind of card I want to add based on my experience will a lot of card/ turn base game before. The only problem is I cannot turn the idea into the actual code to run in my game.

Week 7 of Term 3:

4/09/2023(Monday)

I done 2 more card today which is healing basically heal by add extra hit point into the total health. And teleport I basically using the same code but without range limit. This spell can only be use 3 time per battle for balance.

6/09/2023(Wednesday)

Today I added 2 more maps with similar enemy. My plan was finishing every basic feature in my game before adding more map, enemy and card.

8/09/2023(Friday)

Today, I complete all the basic feature for my game. I planned to add 6 more map with a few more enemy before the due day (15/09/2023). I created a few more enemies today by duplicated the old enemy, changing sprites and change several statistics such as health, damage, and weakness if have.

Week 8 of Term 3:

This is a final week, I only have a few more days to complete my game. So far most of my game already complete. With 10 different maps, 9 enemies, all basic feature is completed and so far, there are not any bug. I will not touch or change any code this week, all I did was changing a bit of the interface, adding a few basic button to go back room and a some quick tutorial in early stage.

X. Code Reflex- Struggles

Throughout the year, I had come across a lot of different errors when trying to put all my code together, with a turn base type of game with chess like mechanic there are not much tutorial I can count on. There only several tutorials I had watch that actually helpful which is showing health bar, button and hover feature and some basic tutorial showing me how Game Maker Studio 2 work. This section will list several major errors that been in my game for a few weeks.

First of all, is global variation declaration: My game had multiple different maps so when player change between map, technology the game restart by code but somehow all the global variables still not reset which led to some feature in my game running uncontrollable. I had to create several scripts to reset global variable, instance destroy all enemy and player, basically restart game and reset all variable.

Secondly, there was a bug that stayed in my game for a few months. It related to my game moving feature where enemy and player moving grid by grid. This bug caused enemy or player to jump in one similar grid. To fix this I had to create a variable name contain character and if it is true then both player and enemy cannot go to it.

Most of my problem is all around variable since it just hard for me to get the enemy id, variable and stat. Sometime the code just works normally when I use id but sometimes it couldn't find the similar id enemy. For 5 months, there war a lot of small code that caused by my mistake, miss word, and a lot of errors due to my logic. In this time, I got supported by teachers, tutors, and friends.

XI. Credit

This section is to thank to everyone that helped me during this 5-month progress.

First of all is Ryder Walker, my friend from other graphic design class that have great amount of information about pixel art, designing and music. He had support me a lot by providing plenty of pixel art, enemy design, suggests for my design as well as providing music and sound effects. As a former App Design student, he also has a lot of great idea that was really helpful.

Secondly is Noah, he is student in my App Design class. His game is quite similar to me which is using card to fight enemy, but it is not a turn base chess like game. He had help me with some idea for my game/ music and background.

Lastly is teacher from Elizabeth college and Utas. Firstly, is James Rakich, he was tutor from utas that had help me with a very rough idea, code and logic in how my game should work. Lloyd McDonald is my teacher from App Design class, he had large have a broad knowledge about code as well as world design. He had been really supported and providing a lot of useful information for me to keep on track with what I am doing. Christ Deeley will be the last person, he is a teacher in App Design 2 and I used to went to several of his tutorial in mid term 3 to get some information, suggestion and ideas for my game.