Game Design Document
Tower of hope

Game Overview

Core Overview

Game genre :

Roguelike, Adventure, Dungeon Crawl, Top-down Game

Game's target :

Open chest to find the key for go to next level

Engagement type :

Challenge : Pass the level and fight with Enemies in many type

Discovery : player can get skill combination from 2 weapons that difference type

Goal :

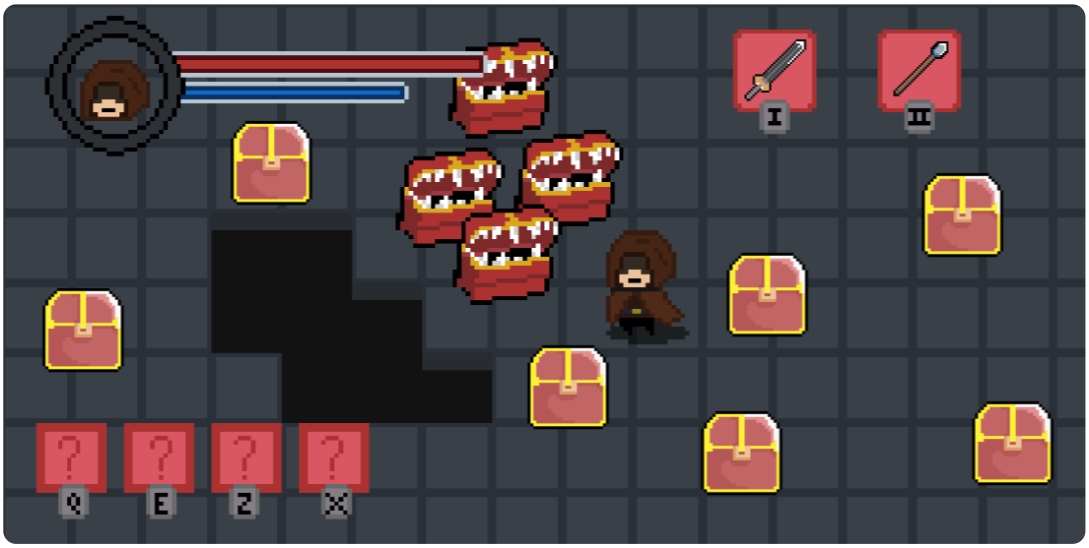
survive and go to last level for fighting with the Boss

Rule :

- No save or checkpoint when player die
- player must open the chest to find the key but player can found enemies, weapons or nothing from chest too

All Concept Art

Mock up

- 

- In real game

Weapon

- Sword

- Spear

- Staff

- Dagger

- Wrench

- Bow

Consumable

- HP Potion

- Mana Potion

Character

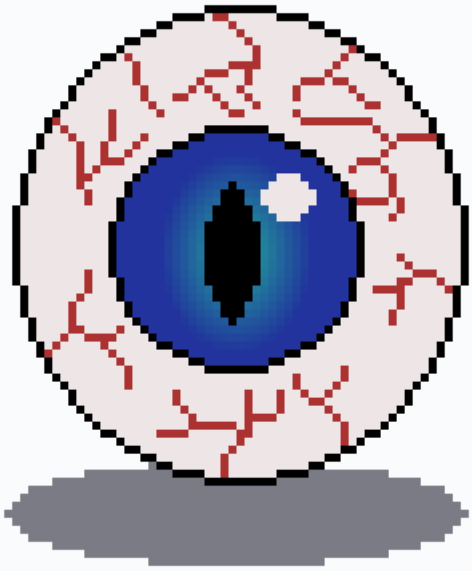
- Player

- Mimic (Enemy)

- Bat (Enemy)

- Golem (Enemy)

- Boss (Enemy)



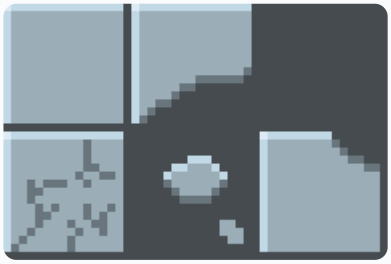
TileMap (V.1)

- Floor

- Wall

TileMap (V.2)

- Floor



- Wall

Interact Object

- Door

Door props

Active door to go to next floor

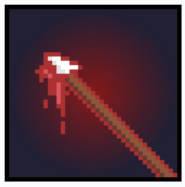
- Chest

Can do animation

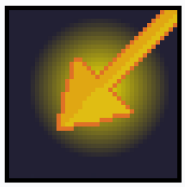
Skill Icon

- Bow And Bow Skill

- Bow And Dagger Skill



- Bow And Spear Skill



- Bow And Staff Skill

- Bow And Sword Skill

- Bow Unique Skill

- Dagger And Dagger

- Dagger And Spear

- Dagger And Staff

- Dagger Unique Skill

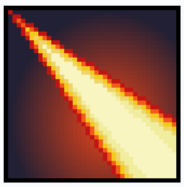
- Staff Unique Skill

- Spear And Spear

- Spear And Staff

- Spear Unique Skill

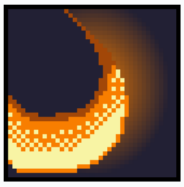
- Staff And Staff Skill



- Sword And Dagger Skill

- Sword And Staff Skill

- Sword And Sword Skill



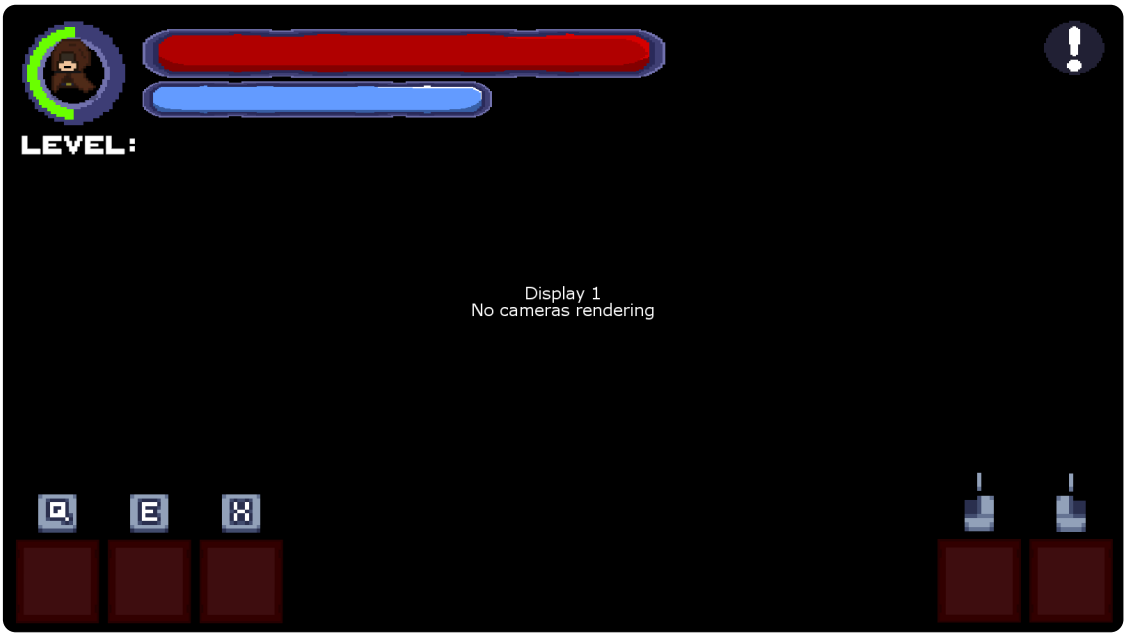
- Sword Unique Skill

- Sword And Spear Skill

Game UI

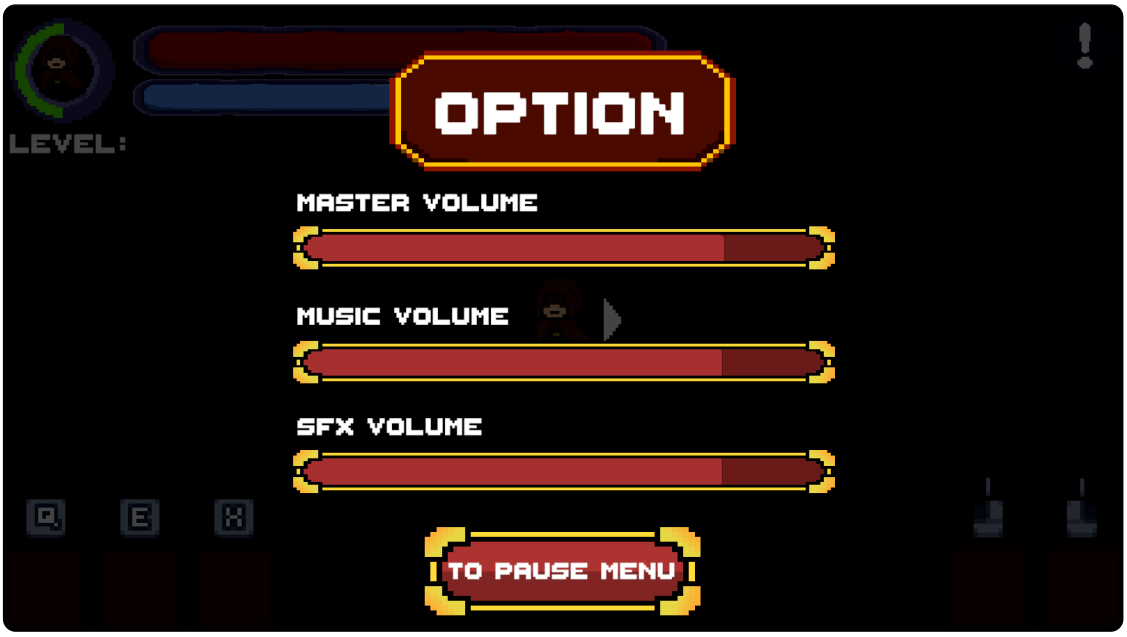
All UI Look

Mainmenu



In game UI

Pause UI

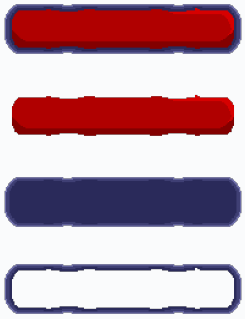


Option UI (In-game)

Option UI (In-Mainmenu)

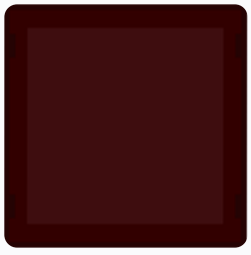
UI separate pieces

Health Bar



- Mana Bar

- Skill Background



- Text banner

- Keyboard And Mouse Icon

- Mainmenu Background

- key Icon

Old

New

- Button And Slider

- Game Banner

- Geometric Shape in pixel art

- Information Button

Decision Note

- Remove Inventory system for Increase player challenge So player can't to pick weapons more than 2 and can't to pick potion to use in the future
- Add Exp system for make player improve enough to fight with enemies in higher level
- Remove Artifact system for simplify because now the game already uses combination of weapons skill if add Artifact system player will be to use more memory to remember. Remove to reduce game's scale

Decision After pre production

- reduce the number of skill combination from 2 skills to 1 skill if count with weapon's skill it will reduce from 4 skills to 3 skills the reason for the reduction was to increase the time for adjusting Game Balance.

- reduce the number of floor from 20 floors to 5 floors the reason for reduce is because in part of enemies have difference type of enemies only 4 type so if player go higher level it will make player boring because the game no variety of enemies (in this part can add more level in the future)

- remove chest rarity system to do other system

- change tutorial from first version that show only text to tutorial use uses a conversation between the game and the player, which at this point helps the player to gradually understand step by step.

- In designing each floor, the chests must be placed away from the walls because if placed next to them, monsters have a chance of spawning outside the screen

- skill combination between Spear and Dagger now player don't take any damage when use this skill because first time we want this skill can knock back enemy but have error so changed it.

- move weapon UI's position to bottom right because skills UI's position is bottom so the focus points of the players will not be spread out much.

- Now player can see number of damage that enemies take when attack enemies from before player can see only enemies turn to red color when they take damage because we want the player to be able to know their own current attack power.

- player cant pick weapons when have enemies because want to protect from spam to open many chest and to challenge player so if player forgot to pick weapon player will fight with current weapon that you have.

- In the normal attacks of ranged weapons, before that can used to attack through but now range weapons can't used to attack through because range weapons is over power that can kill enemies in early.
- add restore HP and mana when player level up because the Game has very few ways to increase health and mana, players choose to take the risk of opening to farm level from enemies more.
- Audio system can split between Music and SFX because sometime Music can drown out the SFX.
- decided to stop enemies when attacking player Otherwise enemies will running non -stop and that make game too difficult.
- change from edit information in code to edit in inspector or edit in folder scriptable object for the convenience of game designer in balancing.
- change from when open the chest player can open only one until open finished to player can open many chest in the same time.

Game and Mechanics

Gameplay

Core Game Mechanic :

Tower of Hope is roguelike game that when player die they start over from the beginning and start everything from zero. The player must find the key to open the portal to go to the next floor from the chests located on the Map on each floor. Inside the chests player will have the opportunity to found the following

- weapons 20%
- enemies 70%
- the key 5%
- nothing 5%

Different weapons will have different skills. And also has additional skills from holding 2 weapons.

Game's target is find the key to go to the last floor and defeated the boss to go out from The tower

Combat System :

Combat system in this game will use 2 type of weapons namely using range weapons and melee weapons and each type of weapon has different skills. but player have freedom to can create combo from weapon that player use with each weapon having its own skill and player will get new skill from 2 weapons that player hold. player can hold 2 weapons and can change weapons to replace the weapons player are holding.

Stat Player :

- HP - player's health
- Mana - player's mana
- Dmg - player's damage
- Exp - point to up player's level

Stat Upgrade :

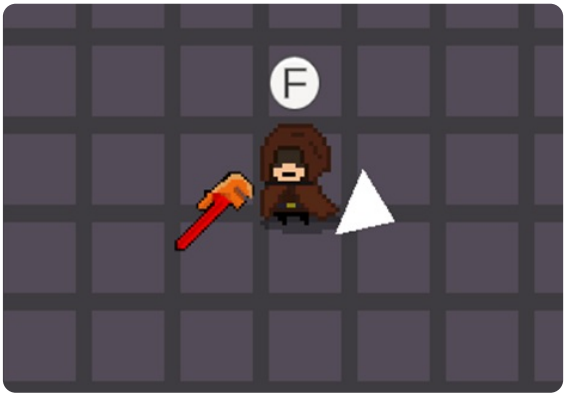
Player get Exp from defeated enemies for upgrade player's stats.

Progression :

Let players feel the challenge of not knowing by having to open a chest without knowing what to expect after opening the chest and there is also skill system by weapon having its own skill and player will get new skill from 2 weapons that player hold.

Tutorial System (Old)

Tutorial system for new players Let's understand the game system.

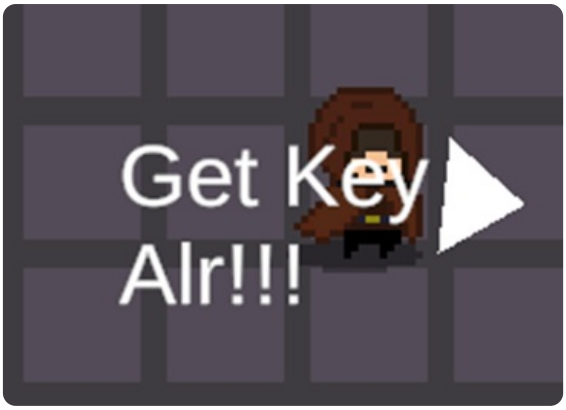


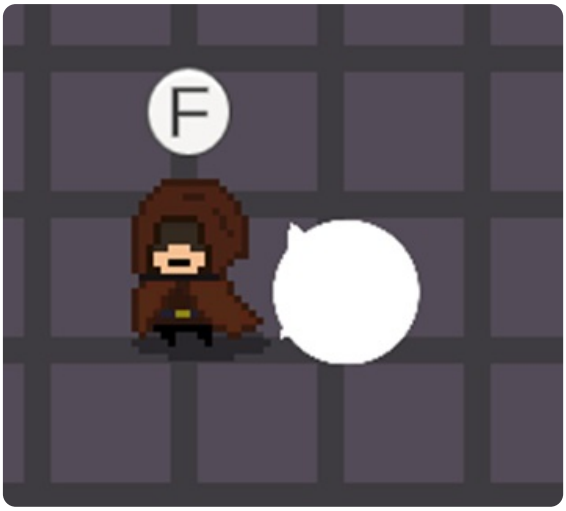
Use F to pick weapon

Use F to open chest

Have enemies for player to try to attacking

When found the key





When found the portal if already have the key use F to go the next floor

Tutorial System (New)

In the new tutorial version the game will teach you, with text messages. The training will be divided into 5 parts:

- Pick up item
- Open chest
- Attack
- How to get the key
- How to go to the next floor

Level System

In part of player's level player will get EXP from defeated enemies each type of enemies gives different amounts of EXP and as the level increases, more EXP is required. When player levels up, they will gain the following stats:

Damage +2

HP + 20

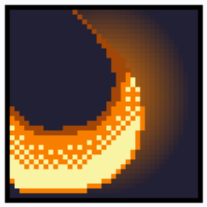
Mana +50

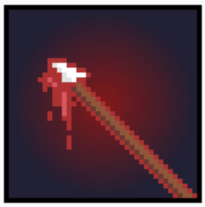
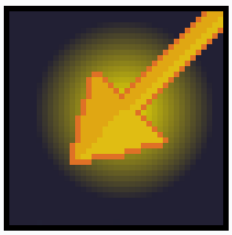
Skill combination System

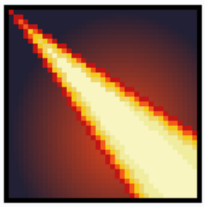
Unique Skill

Bow		
Dagger		
Staff		
Spear		
Sword		

Combination Skill

Sword	Sword	
Sword	Bow	
Sword	Dagger	
Sword	Staff	
Sword	Spear	

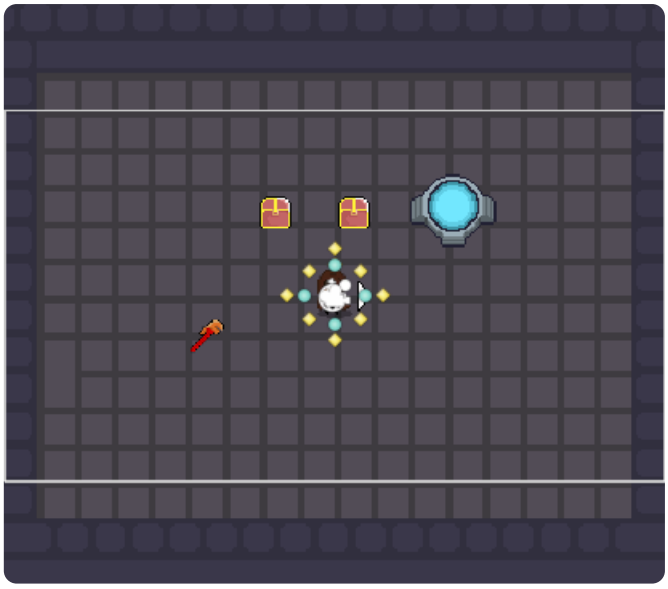
Bow	Bow	
Bow	Dagger	
Bow	Staff	
Bow	Spear	
Dagger	Dagger	

Dagger	Staff	
Dagger	Spear	
Staff	Staff	
Staff	Spear	
Spear	Spear	

Level Design

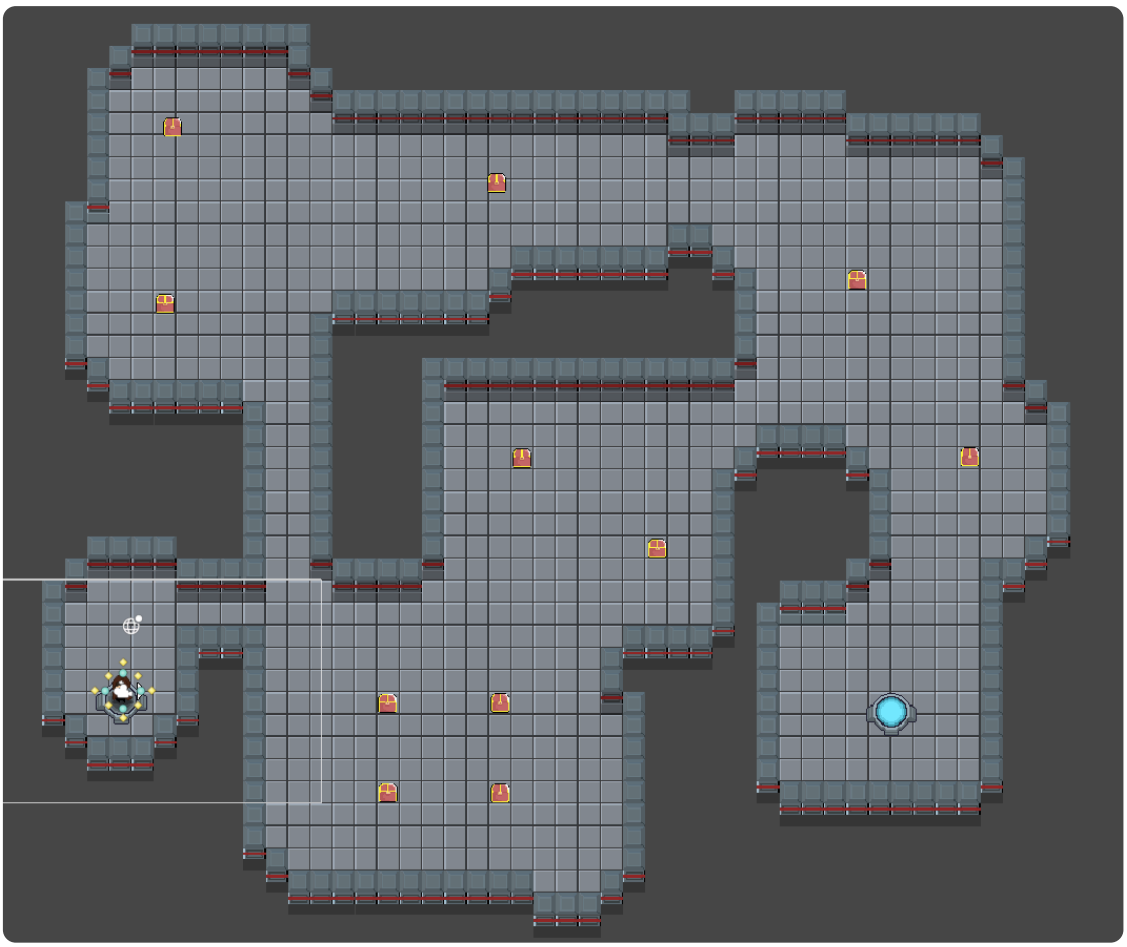
Game will have total 5 floor and if player go higher floor enemies will more difficult and have more chest from previous floor

Floor Tutorial



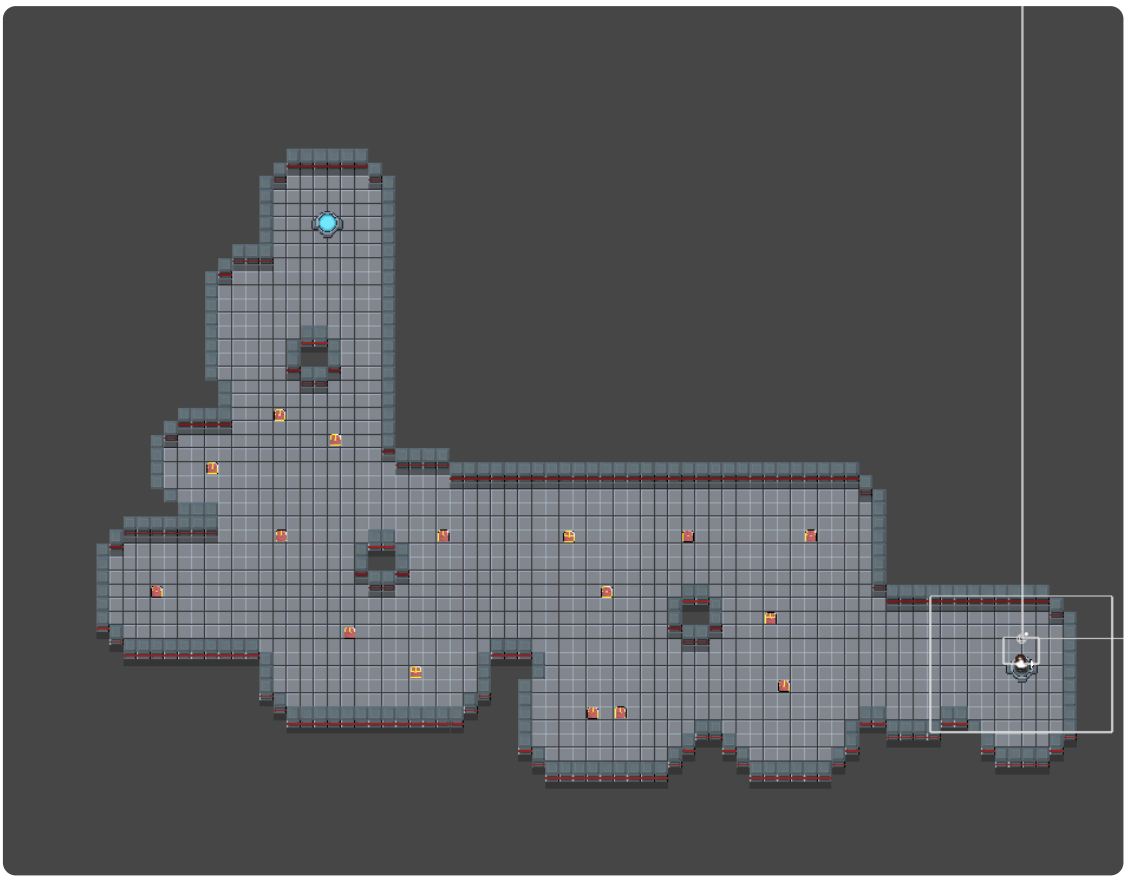
Floor 1

11 chests



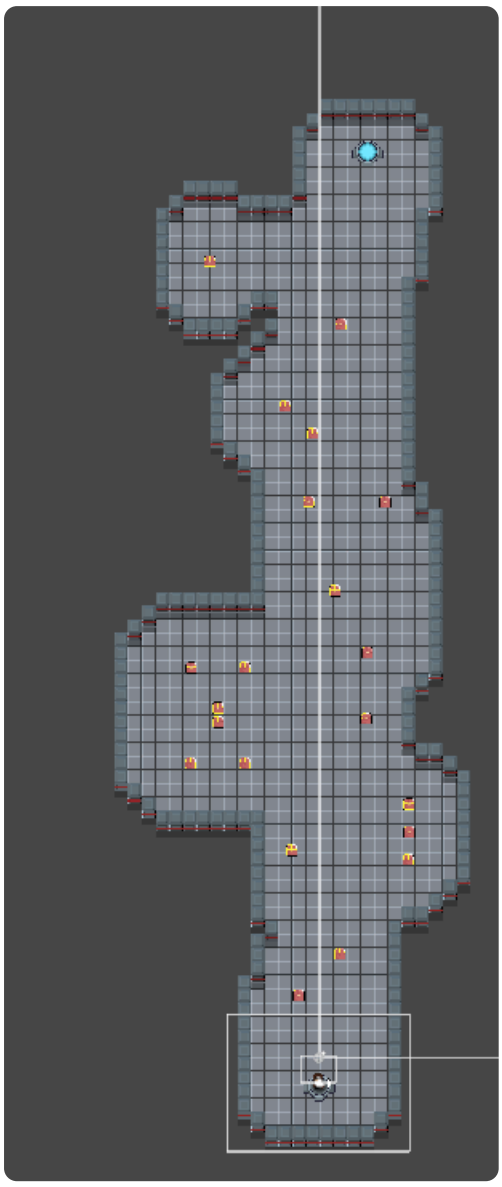
Floor 2

16 chests



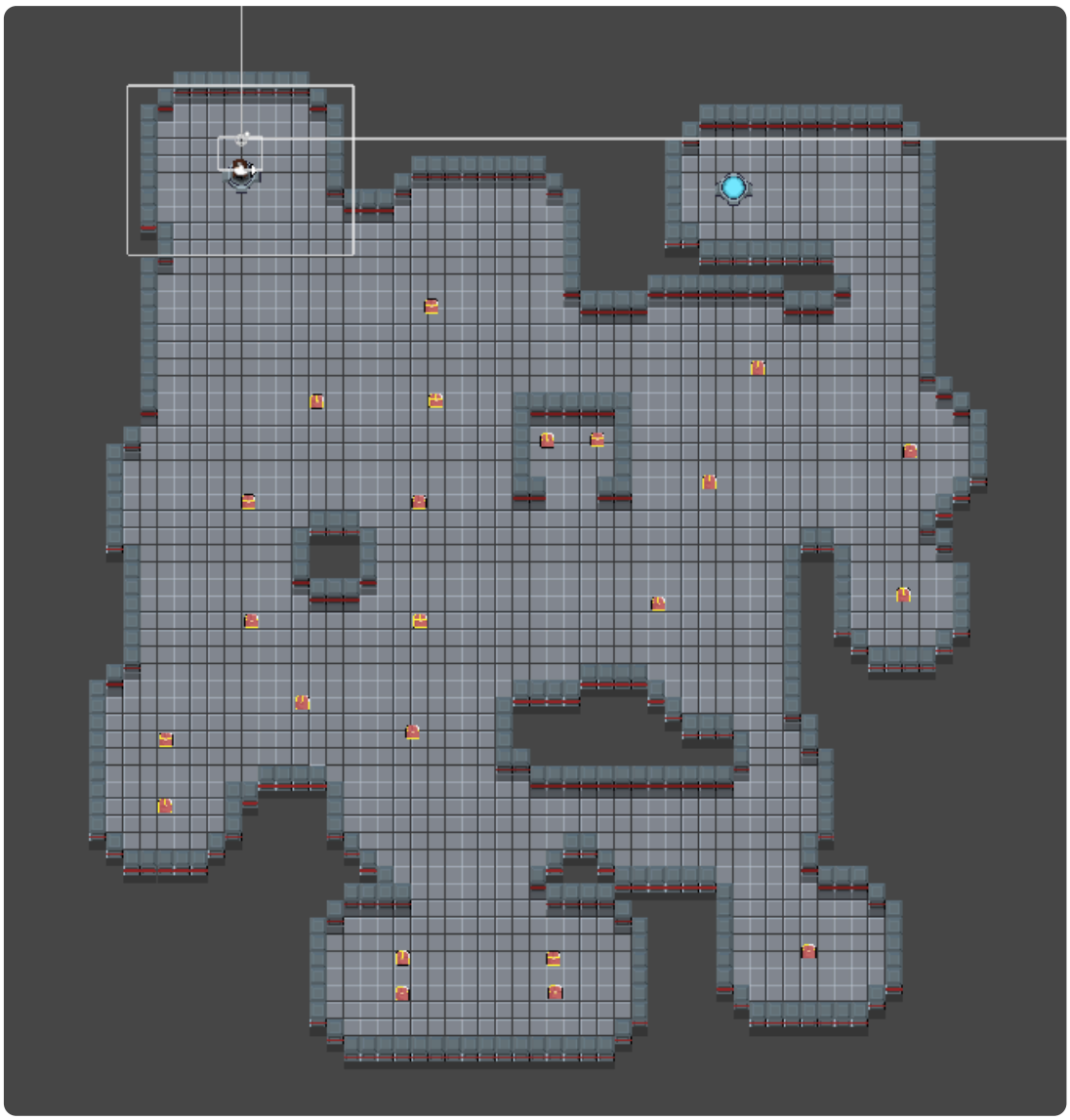
Floor 3

21 chests



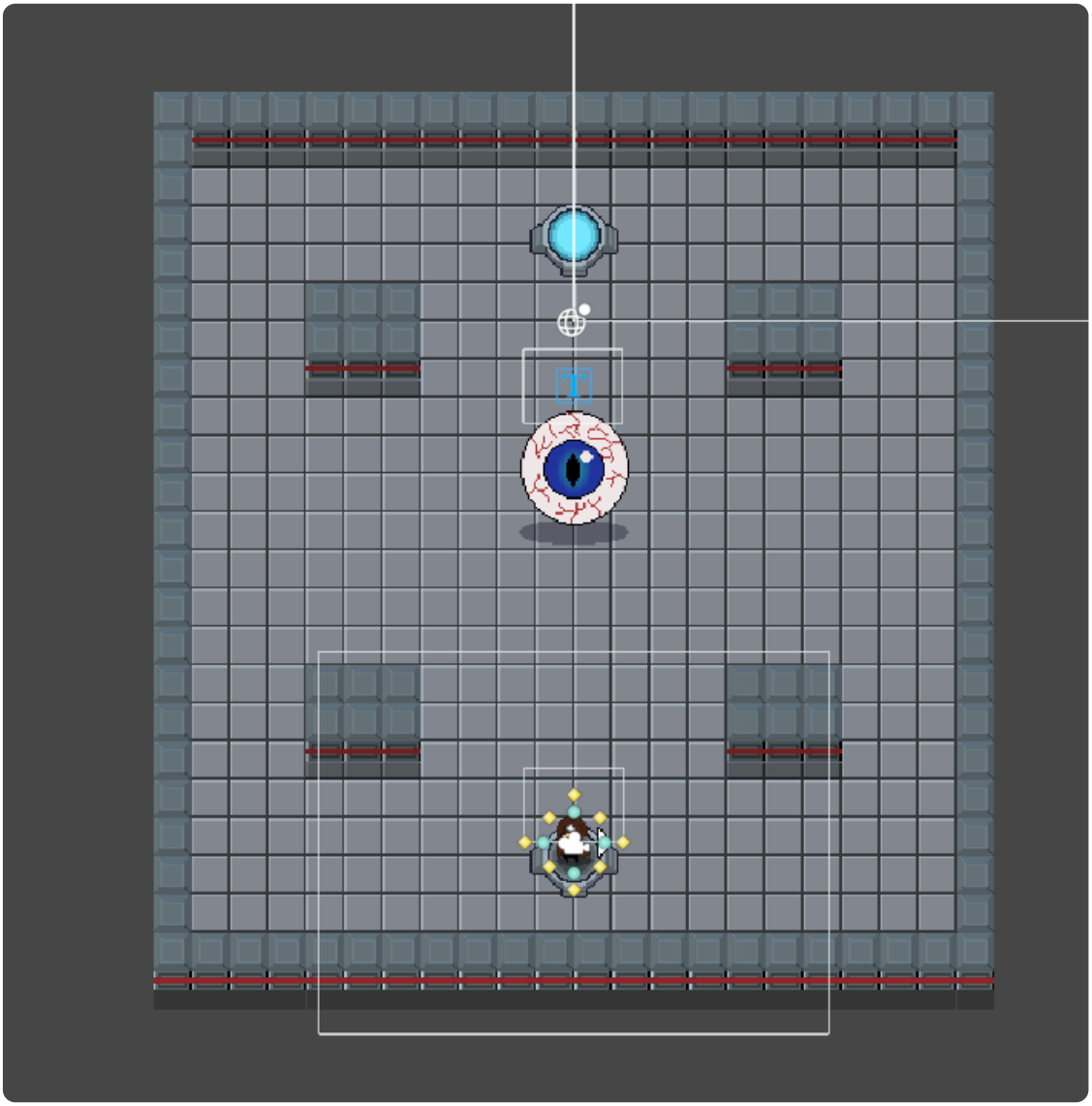
Floor 4

23 chest



Boss floor

For the boss floor, we designed it to be small, so we made the boss immobile and positioned it at the center of the room. We've also added walls to allow players to dodge the boss's attacks.



Main Character

Stat Player :

HP: 50
Mana: 100
Speed: 5
DMG : 2

Enemy & Boss

The formula to increase the damage and health of monsters as they advance to the next floor is as follows: :

DamageWhenChangeFloor

AmountOfHealthWhenChangeFloor

The formula to increase the damage : CurrentDamage = CurrentDamage + DamageWhenChangeFloor

The formula to increase the health : CurrentMaxHealth = (CurrentFloot + AmountOfHealthWhenChangeFloor) + CurrentMaxHealth

Mimic

HP: 30

DMG: ~~2~~ → ~~4~~ → 2

Speed: ~~5~~ → ~~7~~ → 3

Gain Exp : 8

AmountOfHealthWhenChangeFloor : 15

DamageWhenChangeFloor : 4

Bat

Bat

HP: 20

attack player when flying pass player DMG ~~2~~ > ~~4~~ > 1

Speed: ~~9~~ > ~~7~~ > 6

Gain Exp : 8

AmountOfHealthWhenChangeFloor : 10

DamageWhenChangeFloor : 2

Golem

Golem

HP: 150

DMG: ~~5~~ > 3

Speed: 4

Gain Exp : 12

AmountOfHealthWhenChangeFloor : 25

DamageWhenChangeFloor : 6

Boss

HP: ~~500~~ > ~~2000~~ > ~~1000~~ > ~~600~~ > 3000

Speed: ~~3~~ > 0

special attack:

Basic ATK : Fires bullet follow player DMG :10

Death ray : Shoots lasers in 4 directions and spinning . DMG : 15

Million Bullets : Unleashes a massive barrage of bullets all around. DMG : 10

Player Weapon

- **Wrench** (Main Weapon)
  DMG: ~~3~~ > 5

- **Magic Staff**
  DMG: ~~10~~ >11
  Projectile Speed: 6
  Skill: Splash fire
- DMG - 20
- Mana cost - 20
  CD : ~~12~~ > 8

- **Sword**
  DMG: ~~15~~>13
  Skill: +2 ATK in 3 sec
- Mana cost - ~~10~~ > 12
  CD : 7

- **Spear**
  DMG: ~~12~~>10
  Skill: Thrust the spear forward several times at high speed.
- DMG - ~~15~~ > 12 ■■■■■■■■
- Mana cost - 10
  CD : 5

- **Dagger**
  DMG: ~~8~~>7
  Skill: Dash
- Mana cost - 10
  CD : ~~5~~ > 3

- **Bow**
  DMG: ~~12~~>10
  Skill: shooting 3 arrows
- DMG - ~~5~~ > 7
- Mana cost - ~~5~~ > 10
  CD : ~~3~~ > 4

Combination Skill

Magic Staff + Sword

Skill -Have sword spinning around player

Purpose - can make space for player and protect melee attack

DMG - 10 per sword

Mana cost - ~~10~~ > 18

CD - ~~5~~ > 15

Magic Staff + Spear

Skill - Casts a magical spear to pierce the heads of enemies in range.

Purpose - clear enemies that far from attack range and clear multiple enemies

DMG - ~~10~~ > 15

Mana cost - ~~10~~ > 20

CD - ~~5~~ > 8

Magic Staff+ Dagger

Skill - Cast 5 magic knifes that can follow enemies

Purpose - Help player make more damage

DMG - 10 per knive

Mana cost - ~~10~~ > 25

CD - ~~6~~ > 10

Magic Staff + Magic Staff

Skill -Fires a Huge Laser

Purpose -Help player deal huge damage in short time and clear multiple enemies in the same time

DMG - ~~30~~ > 40

Mana cost - ~~35~~ > 40

CD - ~~20~~ > 18

Dagger + Dagger

Skill -Throw 5 knives forward.

Purpose- Increases the attack range of the weapon with the closest attack range.

DMG - ~~4~~ > 8 per knive

Mana cost - 20

CD - ~~5~~ > 6

Sword + Spear

Skill - Rushes towards the enemy, dealing severe damage and healing player

Purpose - It increases the player's survivability and can be used to cut down enemies.

DMG - 100

Mana cost - ~~20~~ > 25

CD - ~~5~~ > 8

Sword + Dagger

Skill - increase attack speed 40% duration 4 sec

Purpose- Helps increase player's DPS for a short time.

Mana cost - ~~20~~ > 12

CD - ~~5~~ > 7

Sword + Sword

Skill - Swipe around 1 time

Purpose- Make space for player and increase dps

DMG - ~~12~~ > 15

Mana cost - 15

CD - ~~10~~ > 4

Spear + Dagger

Skill - Throws 8 knives around and will not take damage while using skills.

Purpose- can dodge damage from enemies in a period of time

DMG - 10 per knive

Mana cost - ~~10~~ > 15

CD - ~~5~~> 10

Spear + Spear

Skill -Throws the spear forward and player lunges back.

Purpose- player have more mobility and can make damage in the same time

DMG - ~~5~~ > 11

Mana cost - ~~20~~ > 15

CD - ~~5~~ > 4

Bow + Dagger

Skill - Shoot arrow that make enemies bleeding (bleeding deal damage to enemy 20 hp per sec in 4 sec)

Purpose- Increase DPS in early game

DMG - ~~20~~ > 15

Mana cost - ~~40~~ > 20

CD - ~~1~~ > 10

Bow + Bow

Skill -make rain of fire arrows that follow player and deals damage to the ground for a period of time.

Purpose- increase DPS for players can gain a lot in a short period of time.

DMG - 5 per 1 arrow

Mana cost - 20

CD - ~~5~~ > 8

Bow + Sword

Skill - Shoot arrow and stun

Purpose- stop the movement of enemies

DMG - ~~5~~ > 7

Mana cost - ~~10~~ > 15

CD - ~~5~~ > 10

Bow + Spear

Skill - Shoot huge arrow and arrow can pass through enemies.

Purpose- Increase DPS

DMG - ~~20~~ > 25

Mana cost - ~~40~~ > 25

CD - ~~5~~ > 12

Bow + Magic Staff

Skill - Shoot arrow random between slow enemies or bleed

Purpose- slow down enemies movement and Increase DPS

DMG - ~~3~~ > 12

Mana cost - ~~30~~ > 15

CD - ~~5~~ > 1

Regen item

Hp Regen - Healing player HP : Heal - ~~3 Hp~~ → 5 Hp	
Mana Regen - Restore mana Mana : ~~50 Mana~~ → 20 Mana	

Keybind

Main Control (W, A, S, D)

- W (UP)
- S (Down)
- A (Left)
- D (Right)

Skill Control (Q, E, Z, X)

- Q (Skill weapon 1)
- E (Skill weapon 2)
- X (skill combine)

F = Open Box , Take Item

ESC = Option / Pause

Left / Right Click = Normal Attack

Sound Design

Normal Attack

ATK bow	ATK_Bow.wav
ATK dagger	ATK_Dagger.wav
ATK staff	ATK_Magic_Staff.wav
ATK spear	ATK_Spear.mp3
ATK sword	ATK_Sword.wav
ATK wrench	ATK_Wrench.mp3

BG Sound

Mainmenu bg	waiting-time-175800.mp3
In-game bg	battle-time-178551.mp3

Monster Hurt

Bat	Take_Damage_Bat.mp3
Golem	Take_Damage_Golem.mp3
Mimic	Take_Damage_Mimic.wav
Boss	Take_Damage_Boss.mp3

Boss Attack

Skill 1 Basic ATK	Boss_1.wav
Skill 2 Death ray	Boss_2.wav
Skill 3 Million Bullets	Boss_1.wav

Unique Skill Sound

Unique Dagger Skill	Unique_Dagger_Skill.mp3
Unique Staff Skill	Unique_Magic_Skill.wav
Unique Spear Skill	Unique_Spear_Skill.mp3
Unique Sword Skill	Unique_Sword_Skill.mp3

Merge Skill Sound

Sword + Sword Skill	Merge_Sword_Sword.mp3
Sword + Bow Skill	Merge_Sword_Bow.wav
Sword + Dagger Skill	Merge_Sword_Dagger.mp3
Sword + Staff Skill	Merge_Magic_Sword.mp3
Sword + Spear Skill	Merge_Sword_Spear.wav
Bow + Bow Skill	Merge_Bow_Bow.mp3
Bow + Dagger Skill	Merge_Magic_Dagger.mp3
Bow + Staff Skill	Merge_Magic_Bow.mp3
Bow + Spear Skill	Merge_Bow_Spear.mp3
Dagger + Dagger Skill	Merge_Dagger_Dagger.mp3
Dagger + Staff Skill	Merge_Magic_Dagger.mp3
Dagger + Spear Skill	Merge_Dagger_Spear.mp3
Staff + Staff Skill	Merge_Magic_Magic.wav
Staff + Spear Skill	Merge_Magic_Spear.mp3
Spear + Spear Skill	Merge_Spear_Spear.mp3