

Chaos Strike

Game Design Document

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Overview

Fast paced hack and slash adventure. The game revolves around a complex combo system for the player to experiment with against multitude of enemies and bosses with unique skills and attack abilities.

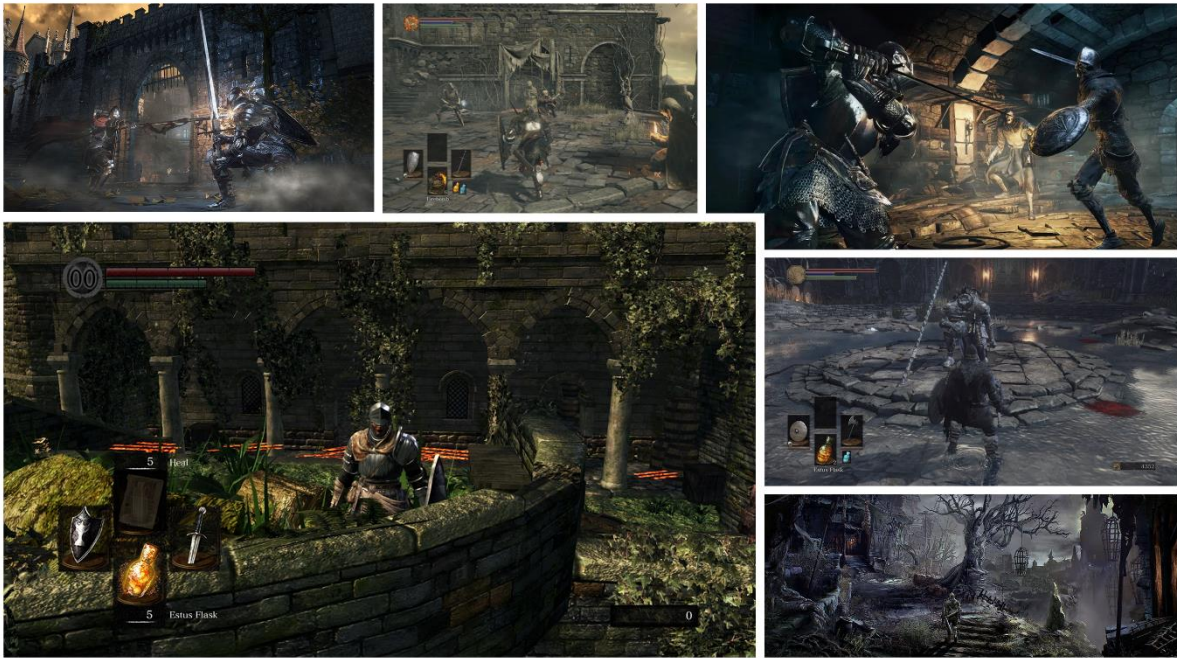
Theme

The game theme with me gothic/ medieval fantasy.

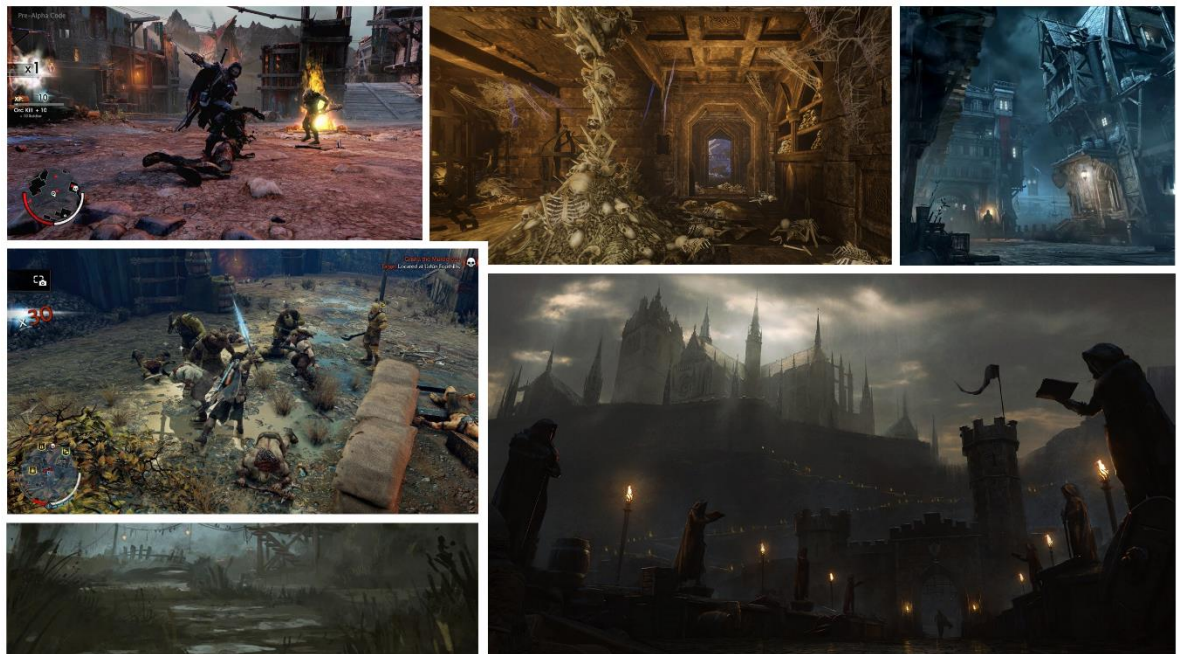
Overall area design



Castle Theme



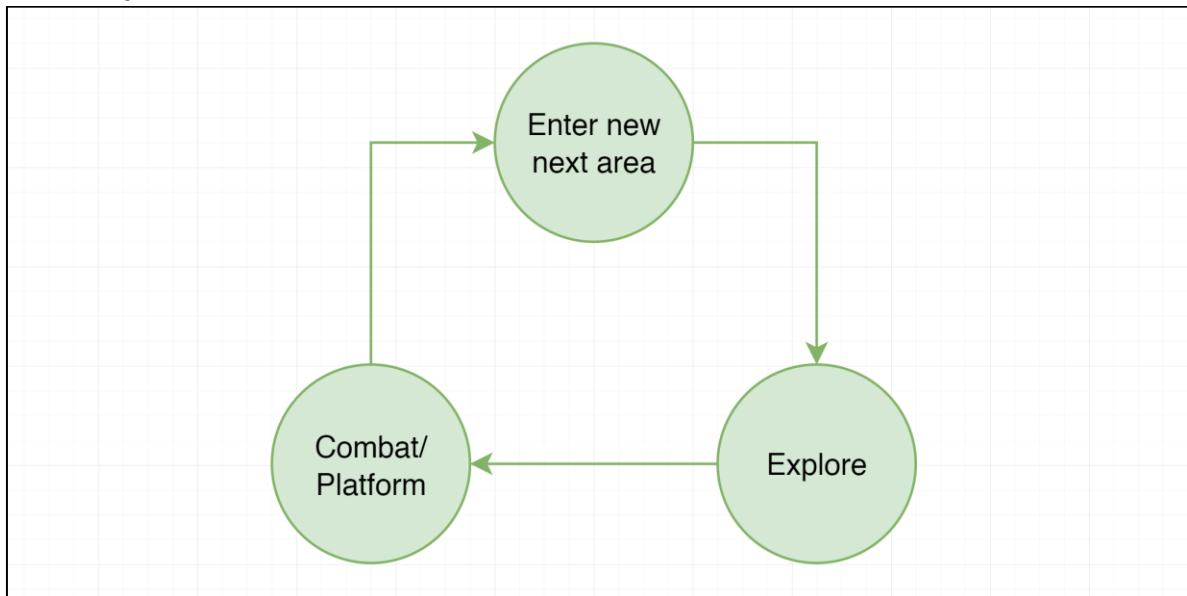
Dungeon/interior design



Outside forest area design



Game loop



The player will explore the world as they kill enemy waves and platform across different environments. As they explore, they can find items that can upgrade their ability to fight as well as give them more ways to combat enemies.

Design pillars

- Exploration
- Combat
- Platforming

Character design

Player Character

The player character is going to be a cast out knight or a mercenary. Mainly the inspiration I am going to take from are medieval fantasy, from games like Dark souls, Shadow of war and For Honor. However, in terms of abilities and skills most of my inspirations came from Devil may cry, Nier automata as well as Shadow of war.

SLAYER



OVERVIEW – Player Character

Slayer is a skilled and aggressive warrior who can dash out attacks rapidly as well as use his ranged abilities to slow and deal damage to enemies. He has his trusted enchanted sword which can deal different type of damage and provide other advantages to the slayer. His skills allow him to cut down enemies at a fast pace as well as dodge enemy attacks with his omnidirectional dash/ dodge.

THEME

Warrior, Mercenary, Medieval, Fantasy, Agile

ROLE

Damage Dealer, Escape, Melee, Swordsman

FEATURES AND MECHANICS

Light attacks – Rapid attacks, Combos

Heavy attack – Moves forward and knock-backs enemies and does damage

Slash – Launches a projectile in an arc damaging any enemies that come in to contact with it.

Dodge – Can dash in any direction to dodge enemy attacks and became immune to damage for a short while.

Weapons - Sword, Totem, Sorcery

DETAILS

Name	Slayer
Health	100
Walk speed	650
Run speed	800
Attack speed	0.1 - 0.3
Inventory	4 slots (items stackable)

Height	180cm
Width	50cm

Player movement

- Standing stationary
- Walking
- Auto running

Player Actions

- Light sword attack
- Projectiles
- Heavy attack
- Weapon attachments (Totem)
- Dodge/Dash

If there is an enemy near the player, the auto running will be disabled.

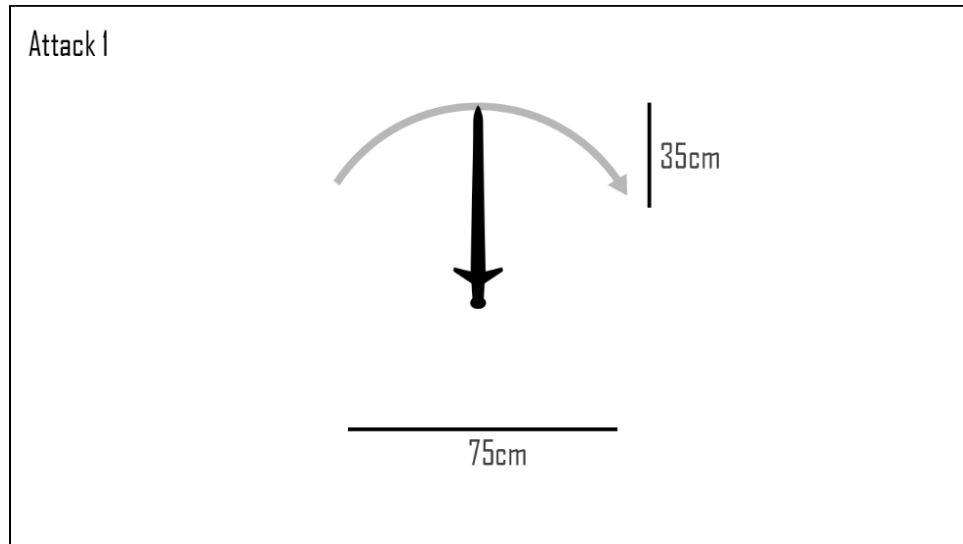
The character will not take any fall damage

Walk speed	650
Run speed	800
Gravity	1
Ground friction	8
Air control	0.05
Acceleration	2000
Deceleration	2000

Character mechanics

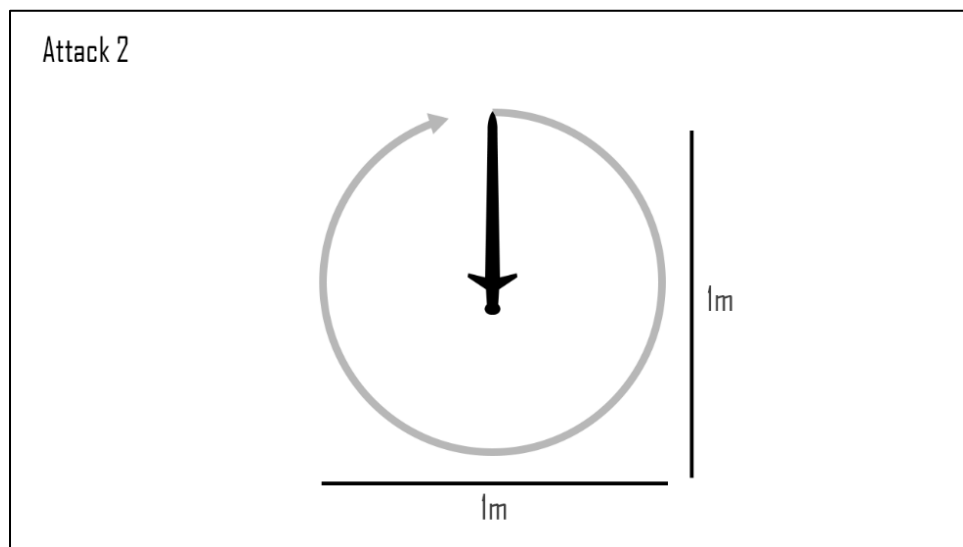
LIGHT ATTACK

Attack 1



Attack name	Attack_01
Damage	5
Damage radius	90
Damage length	100

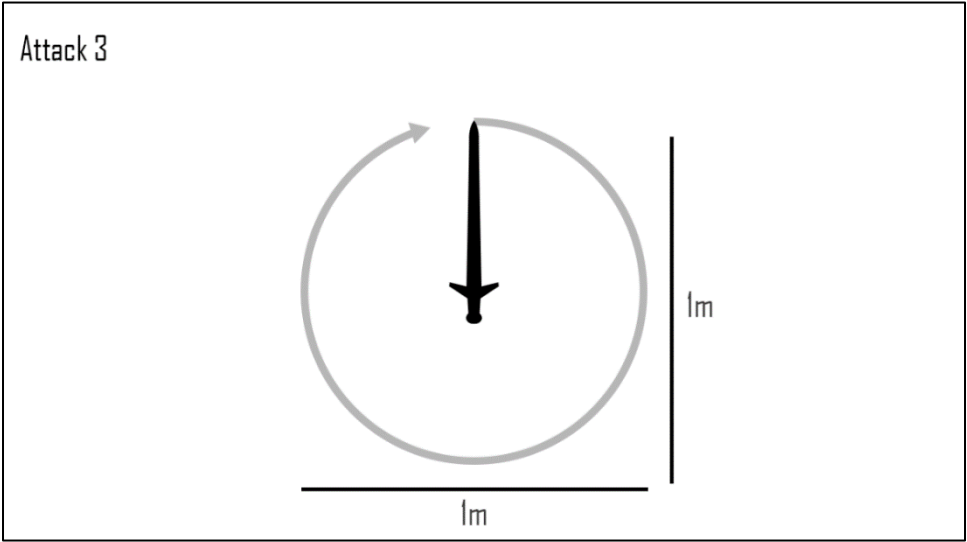
Attack 2



Attack name	Attack_02
Damage	10

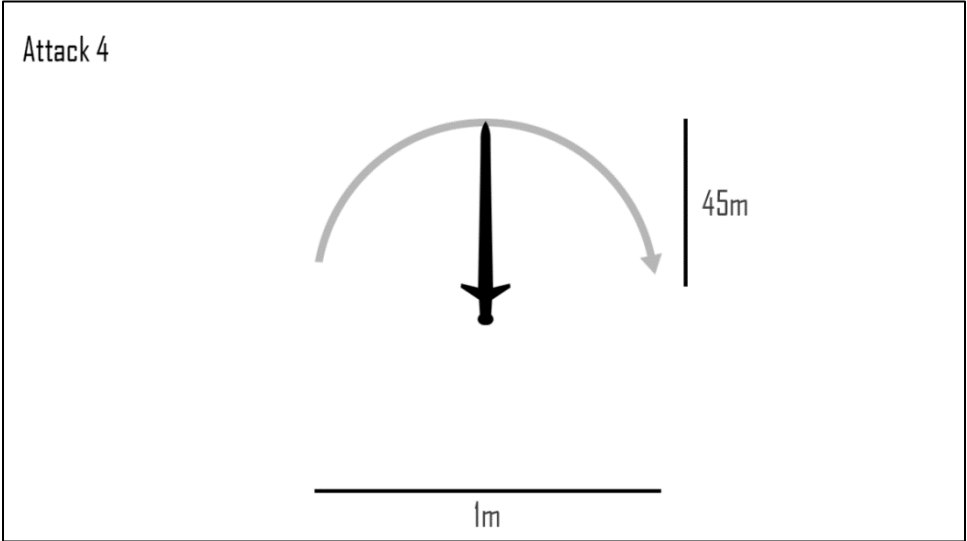
Damage radius	150
Damage length	0

Attack 3



Attack name	Attack_03
Damage	15
Damage radius	200
Damage length	0

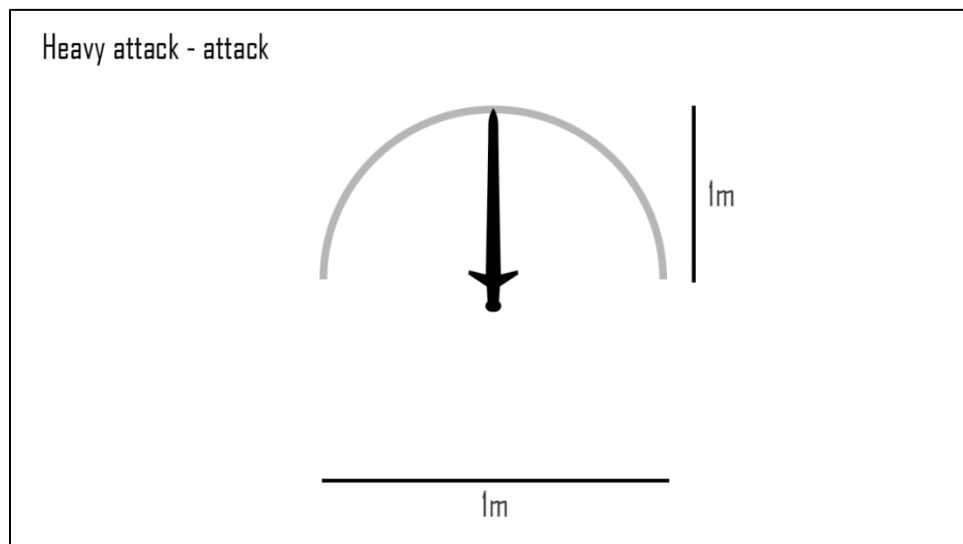
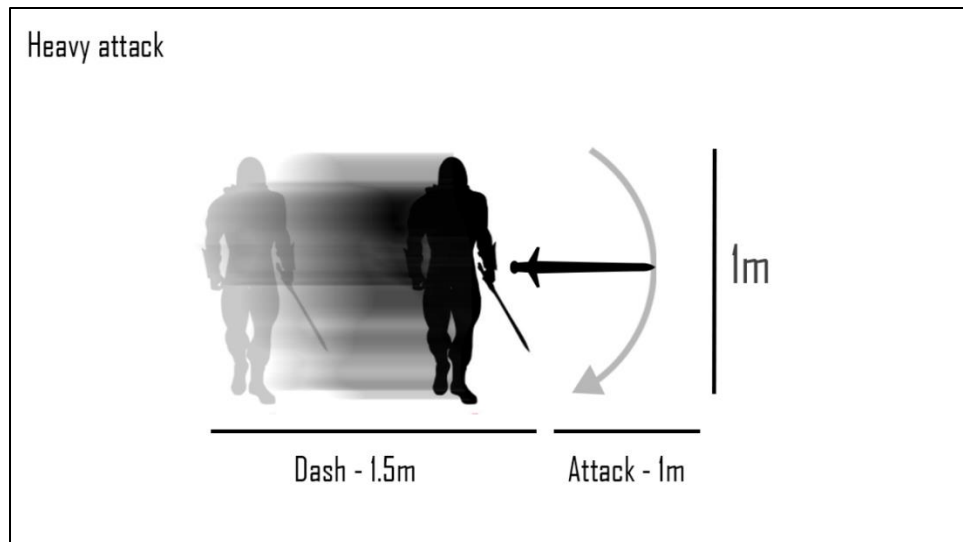
Attack 4



Attack name	Attack_04
Damage	10

Damage radius	120
Damage length	120

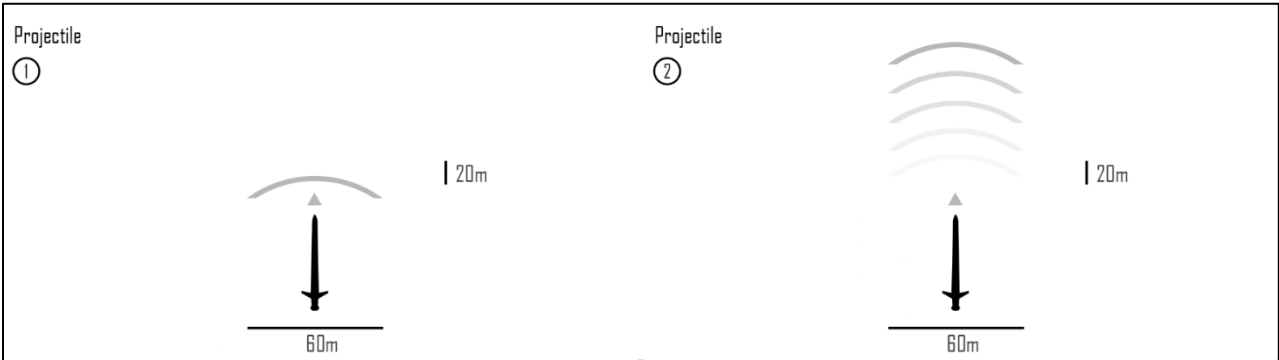
HEAVY ATTACK



When performed the player will move/dash forward and then perform a knockback, damaging and pushing back all the enemies in their radius.

Attack name	Attack_05
Damage	15
Damage radius	300
Damage length	375
Knockback	15000
Move/Dash range	

PROJECTILE



The character will shoot a projectile. The projectile can be block the environments. The projectile will damage the player like a melee attack, applying stagger and pushbacks

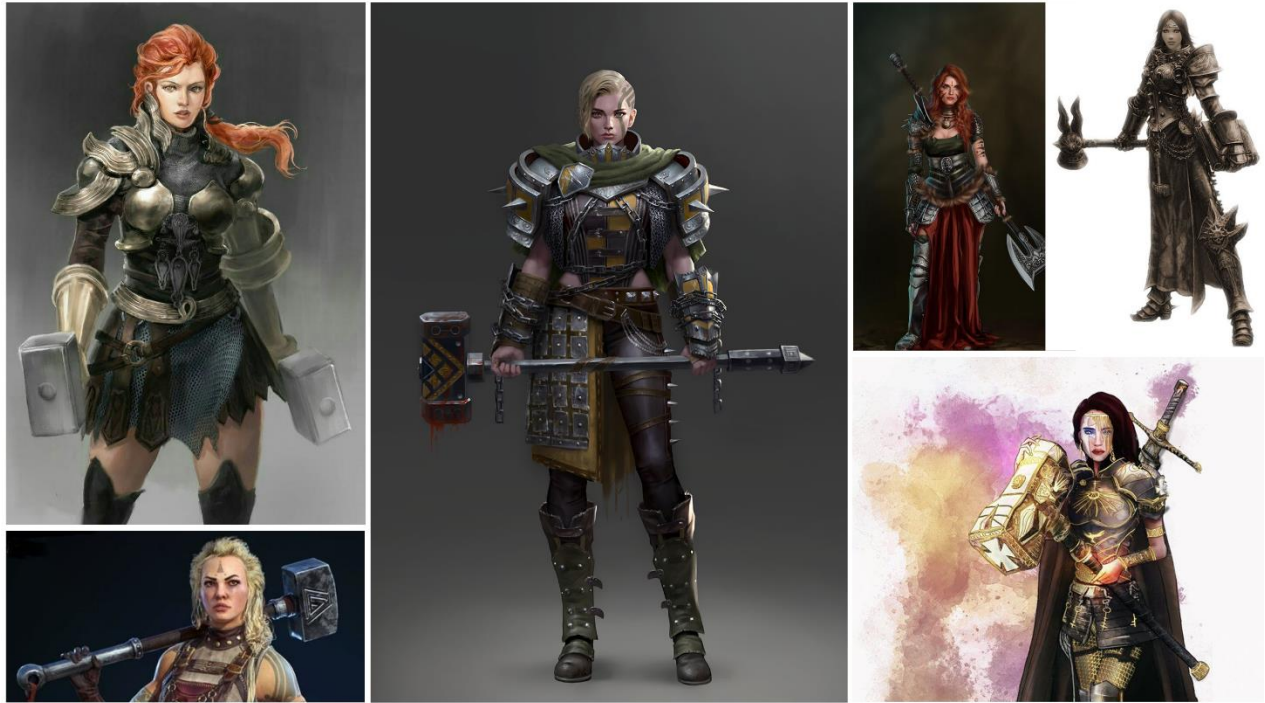
Attack name	Projectile
Damage	6
Damage radius	22
Damage length	75

Enemy design

Enemies

There will quite lot of enemy characters to make the game more interesting. Each enemy will have their normal attacks with their own combos and a special attack that will differentiate them from each other. Enemies in hack and slash type combat games tend to be weak in terms of defense but challenging to player in terms of offensive capability.

LONG-HAMMER



OVERVIEW – AI

Long Hammers are dangerous fighter with the ability to launch themselves towards you from a long distance. Their jumps can deal AoE damage to the player. They Also have high armour meaning they don't die easily. She has multiple attack types and combos that can surprise you in the battleground.

THEME

Long-hammer wielder, Medieval, Fantasy,

ROLE

Damage Dealer, Melee, Strong, Slow

FEATURES AND MECHANICS

Light Attacks –Fast attacks, Combos

Launch attack – Jumps forward from afar dealing damage in an area wherever she lands

Block – Reduces incoming Damage

Weapons - Long-hammer, Armour

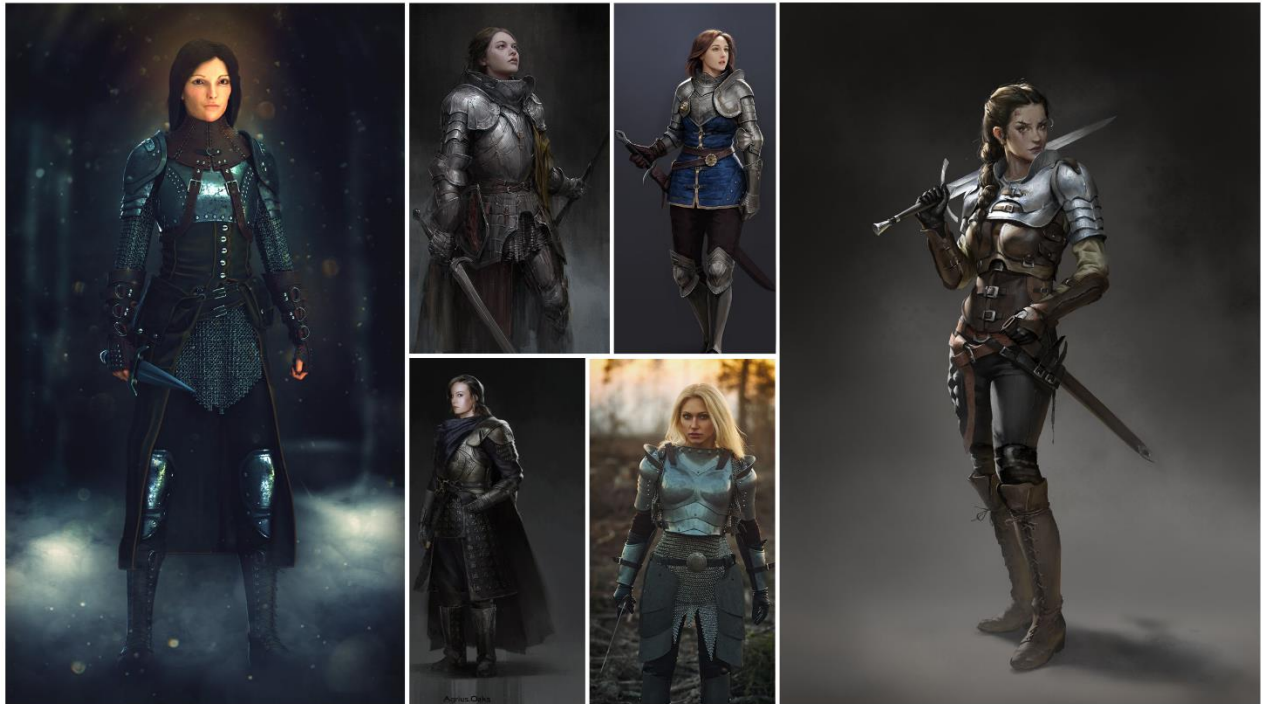
DETAILS

Name	Long Hammer
Health	200
Walk speed	250
Run speed	350
Attack speed	0.4 - 0.7

Height	180cm
Width	50cm

	Damage	Damage radius	Damage length
Attack 1	5	100	215
Attack 2	5	150	200
Attack 3	10	150	200
Attack 4	15	150	200
Attack 5 (Special)	15	150	200

FALLEN KNIGHT



OVERVIEW – AI

Fallen knights are difficult to fight due to their fast attacks, and their shield. They have a thrust attack that allows them to close in and attack the player, making them a threat that can't be ignored. Their thrusts can be very real to player due to its high damage as well as their execution speed. Knight's shield allows her to block projectile damages entirely. The fast attacks also have special combos allowing her to build up damage.

THEME

Knight, Medieval, Fantasy,

ROLE

Damage Dealer, Melee, Strong, Fast

FEATURES AND MECHANICS

Light Attacks – Rapid attacks, Combos

Thrust attack – A thrust forward attack that can dash the Fallen knight forward and deal high damage.

Projectile block – Blocks 100% of the projectile damage

Weapons – Sword, Armour, Shield

DETAILS

Name	Fallen knight
Health	150
Walk speed	300
Run speed	400
Attack speed	0.3 - 0.5

Height	180cm
Width	50cm

	Damage	Damage radius	Damage length
Attack 1	15	100	215
Attack 2	25	150	200
Attack 3	25	150	200
Attack 4 (Special)	15	150	200

OGRE



OVERVIEW – AI

Ogre is slow but vicious, their attack can deal a lot of damage to the player. They have AoE attacks as well as single target attacks that can deal even more damage to the player. They are slow to move but they use their strength to hold down an area and fight the player. Ogre has a special attack where they can jump up and down in an area doing damage to everything near it and then healing themselves.

THEME

Ogre, Medieval, Fantasy,

ROLE

Damage Dealer, Melee, Strong, Slow

FEATURES AND MECHANICS

Light Attacks – Attacks, AOE, Slash, Combos

Jump attack – Can shake the ground by jumping up and down doing damage in an area as well as heal themselves if they have not been interrupted

Passive heal – Can heal through attacks.

Weapons - Club, Legs

DETAILS

Name	Ogre
Health	500
Walk speed	400
Run speed	500
Attack speed	0.5 - 1.0

Height	250cm
Width	145cm

	Damage	Damage radius	Damage length
Attack 1	20	100	215
Attack 2	10	150	200
Attack 3	15	150	200
Attack 4 (Special)	15	400	0
Attack 5 (Special 2)	4	300	600

SENTINEL



OVERVIEW – AI

Sentinels are strong and intimidating swordsmen. Their attacks are poisonous, dealing damage over time and reducing the player's attack damage. They move at medium speed. Their Special attack is a quick combo that can do a lot of damage to the player.

THEME

Knight, Medieval, Fantasy

ROLE

Damage Dealer, Melee, Strong

FEATURES AND MECHANICS

Light Attacks – Attacks, Combos

Mini combo attack – Multiple attacks in a quick succession

Weapons - Sword, Armour

DETAILS

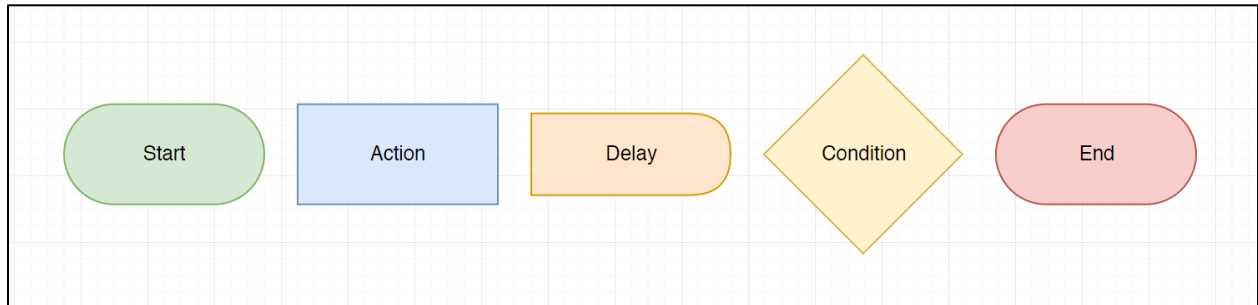
Name	Sentinel
Health	200
Walk speed	250
Run speed	300
Attack speed	0.3 - 0.5

Height	180cm
Width	50cm

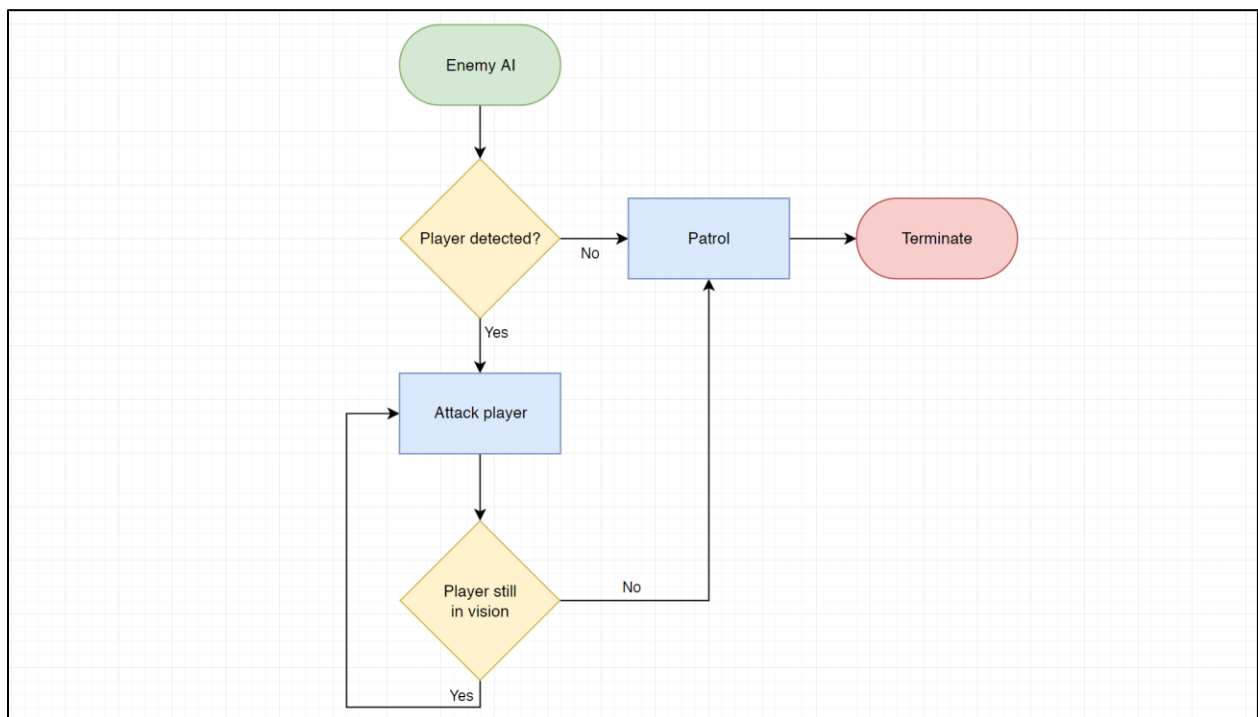
	Damage	Damage radius	Damage length
Attack 1	10	80	120
Attack 2	5	80	120
Attack 3	15	80	130
Attack 4	5	80	120
Attack 5	4	80	120
Attack 6	6	60	130
Attack 7	3	60	130

Enemy AI design

Legend

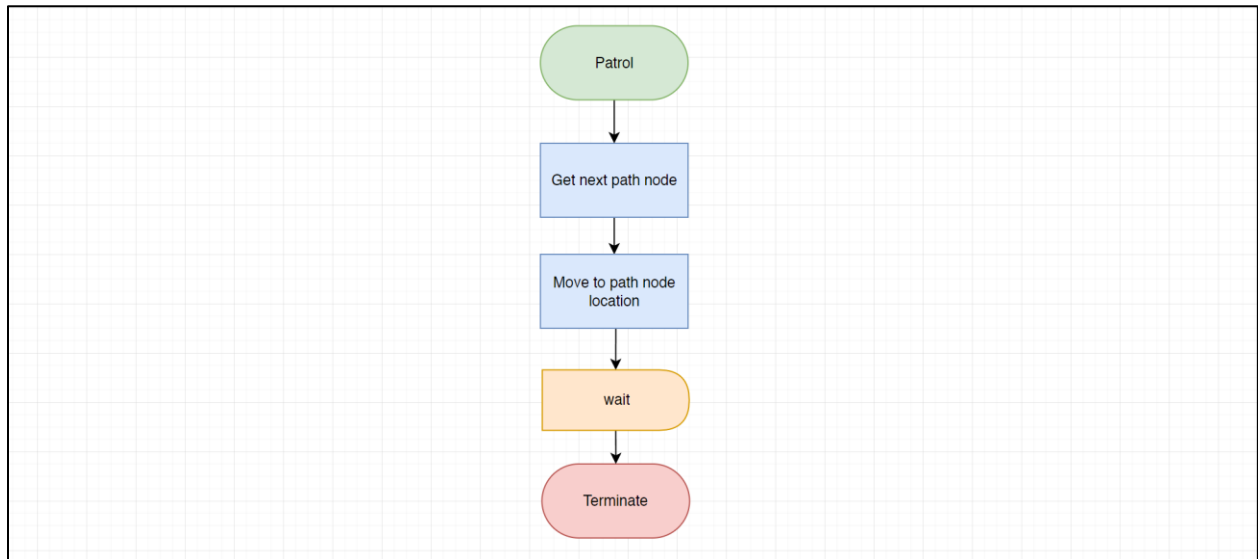


Overall AI behavior



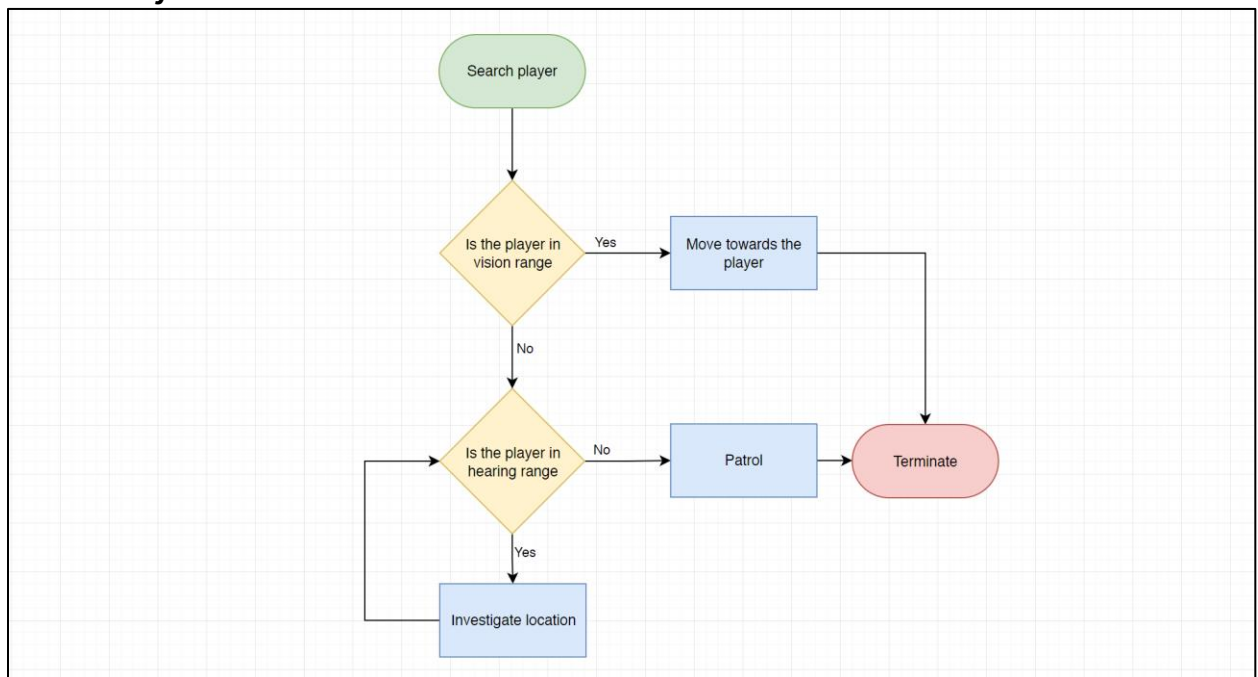
- The AI will walk around in a giving path and if it detects the player they will attack.

Patrol



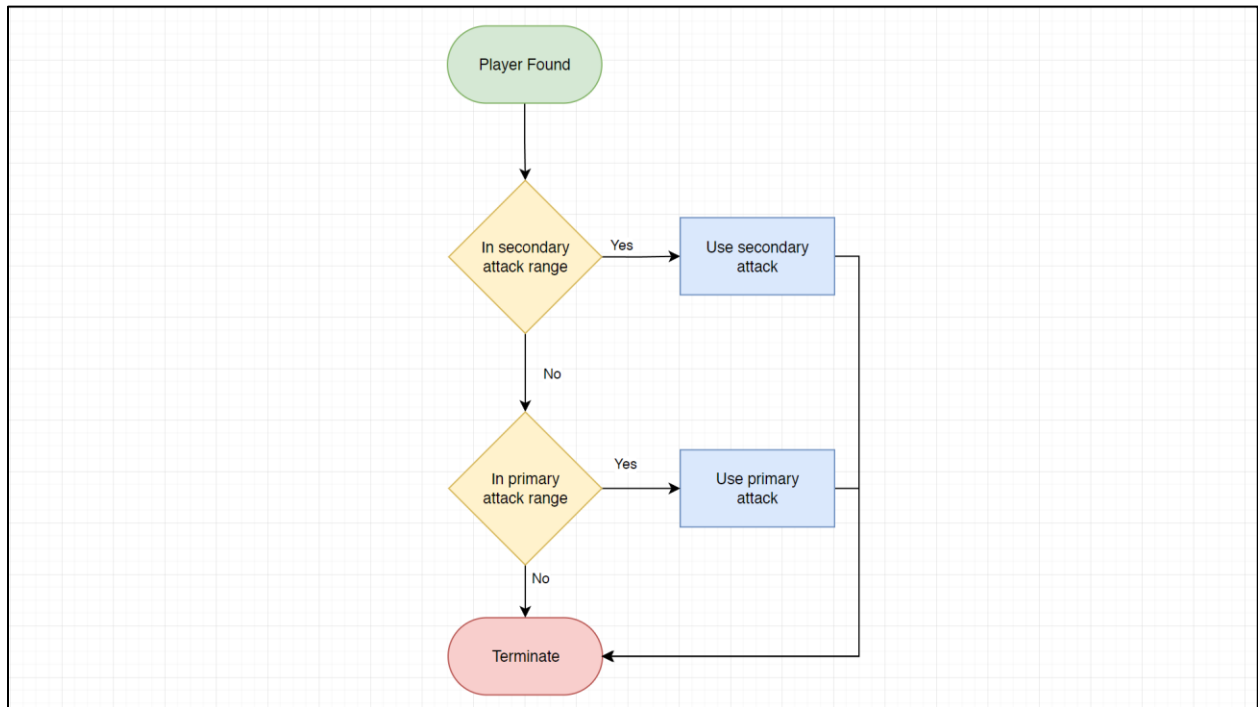
- The patrol routes are predefined, the will move to each one in a given order.

Search Player



- If the player is in the vision range or hearing range the AI will always move towards the player. Once the player gets out of the AI's detection range the AI will get the last path node and continue with the patrol.

Player Found

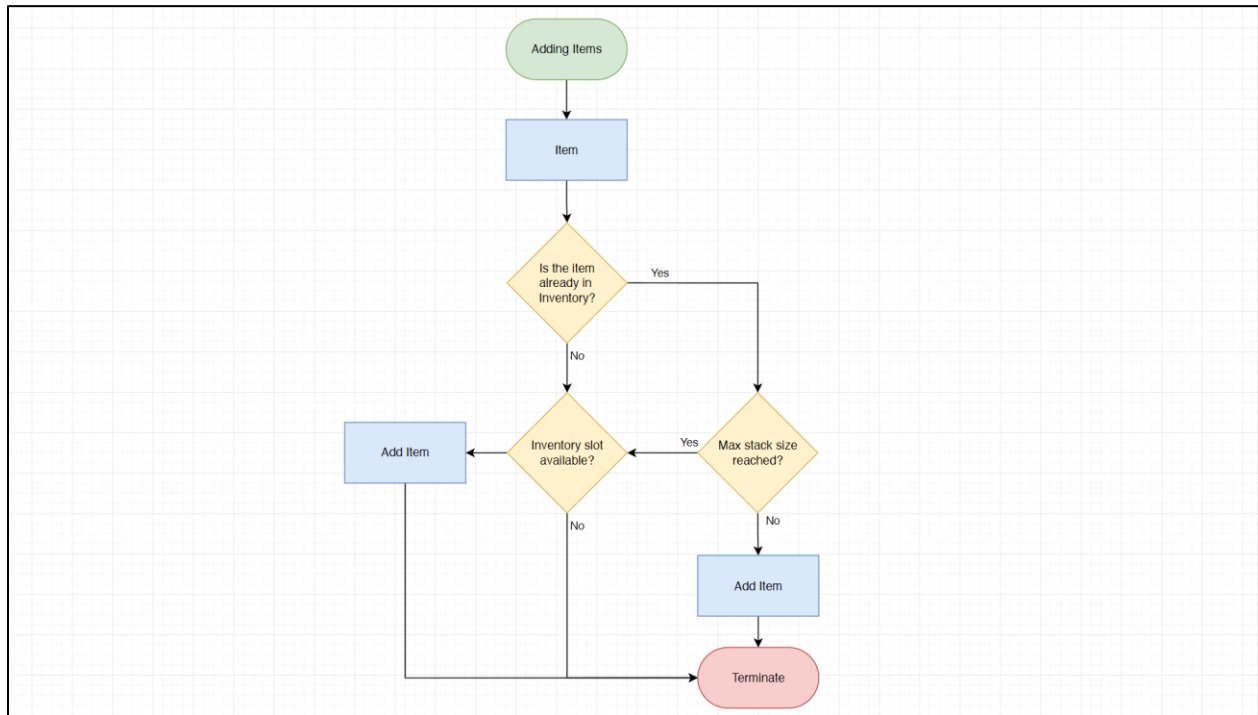


- If the player is found, the AI will constantly check how far the player is and if they come into a range of attack, the AI will execute that attack if its not on cooldown.

Inventory System

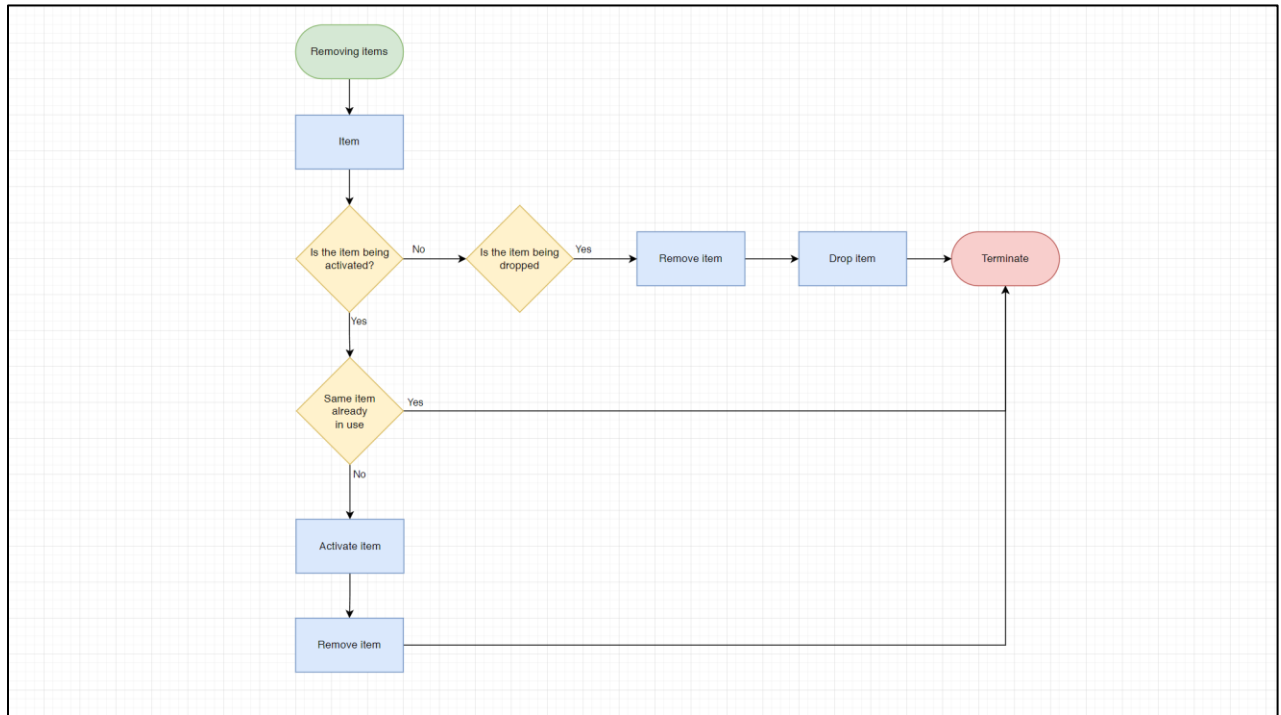
The inventory system is going to be very flexible for the player. The player will have 4 slots, and there is no limit to how many of each item they can have. However, they have their own maximum stack size.

Adding Items



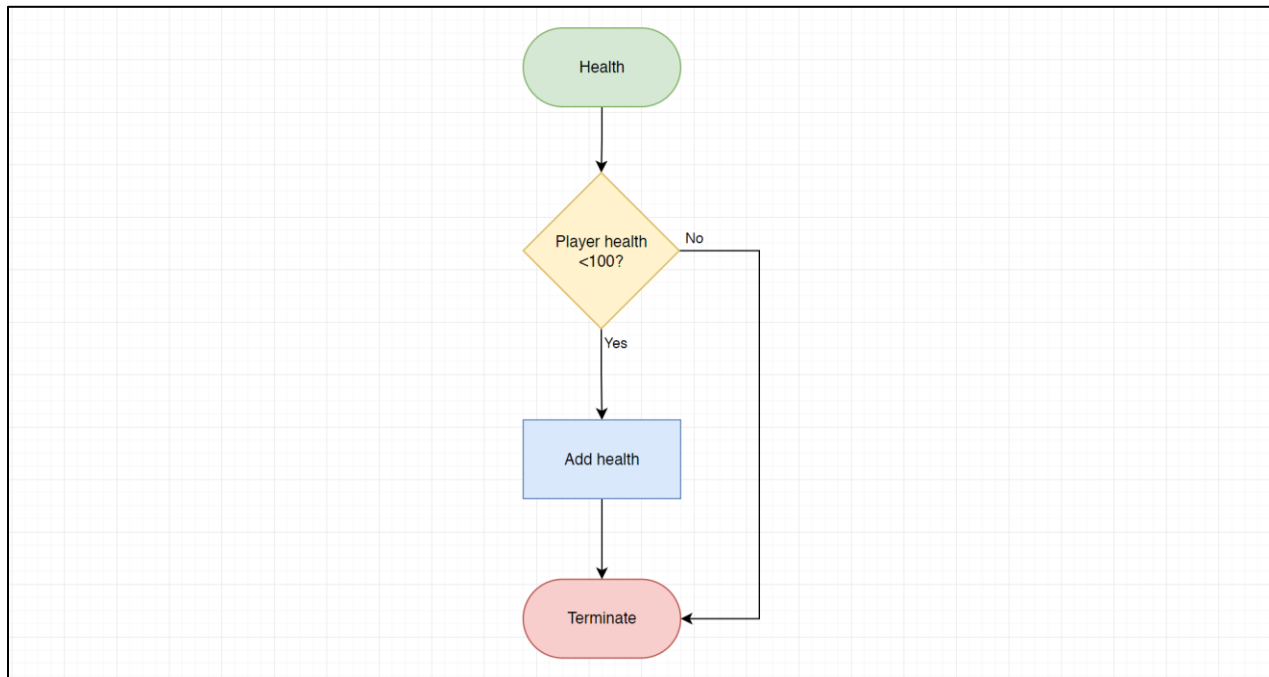
- The items can be dropped to pick up other items.
- If the player is trying to activate an item but the same item is already in use, the item won't be activated.
- All 4 of the inventory slots can have the same item.

Remove items



Items and pick ups

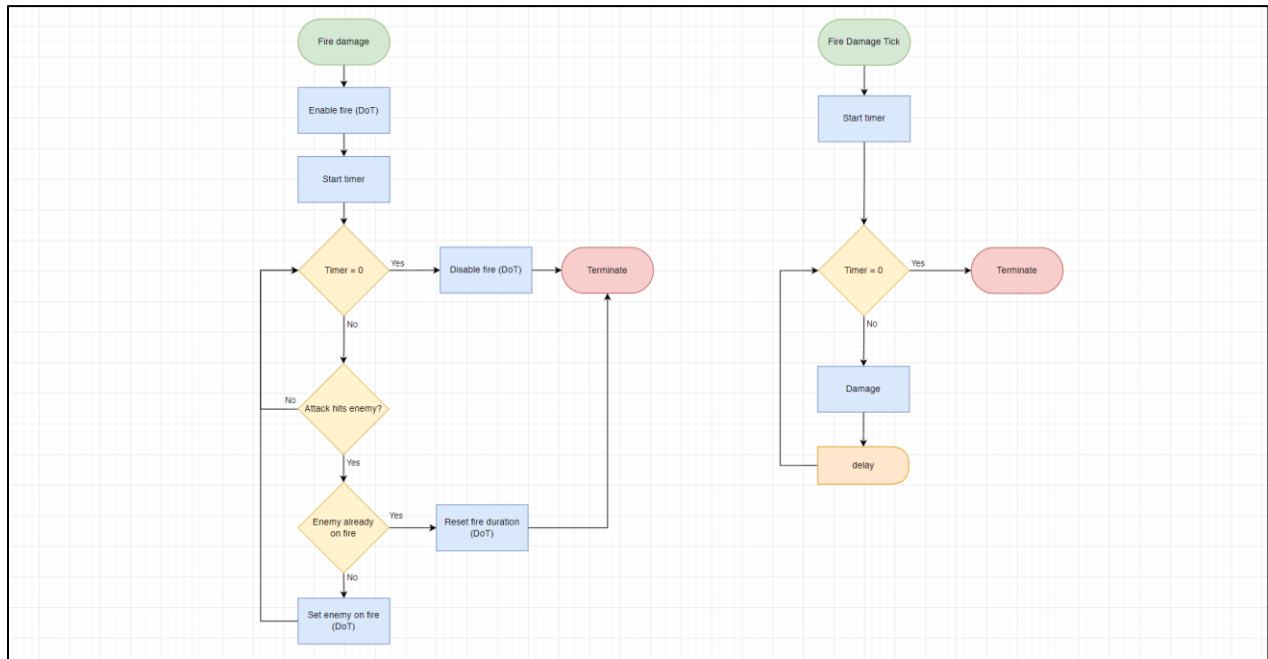
Health



Health item adds small amount of health points to the player instantly.

Health	20
Max stack size per slot	4

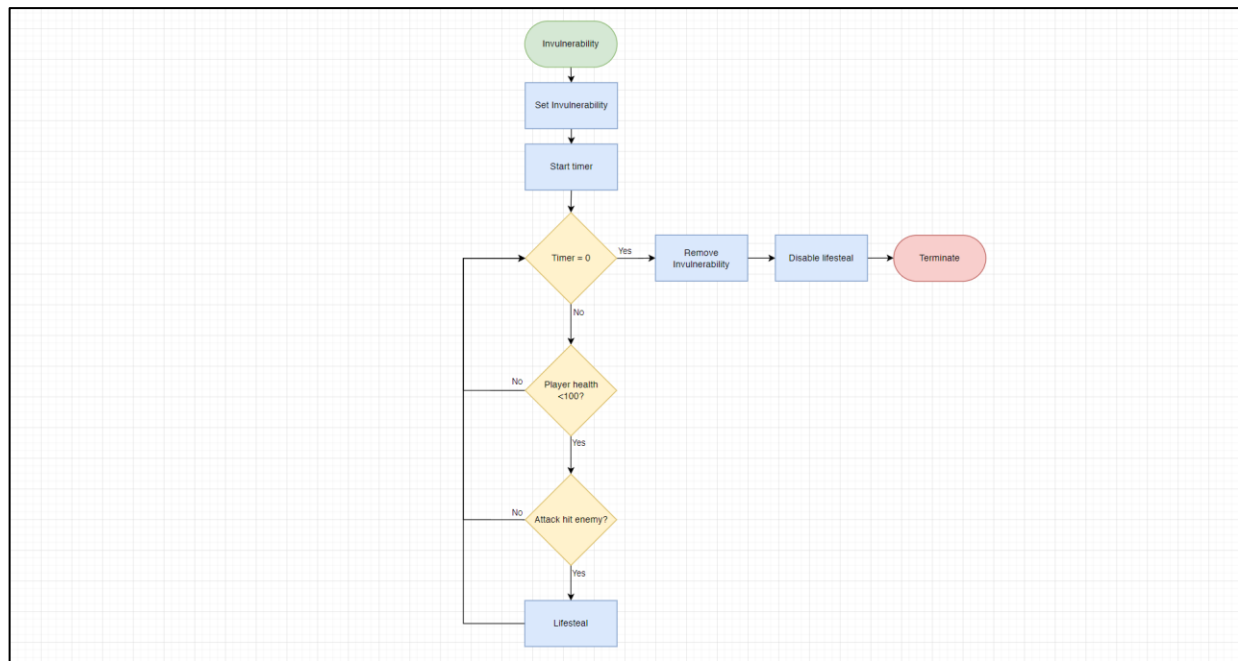
Fire damage



Fire damage when activated will let the player apply damage over time effect on the enemies and do damage to them for a short of duration.

Damage Increase	+15%
Damage over time	5 DPS
Duration	10
Max stack size per slot	2

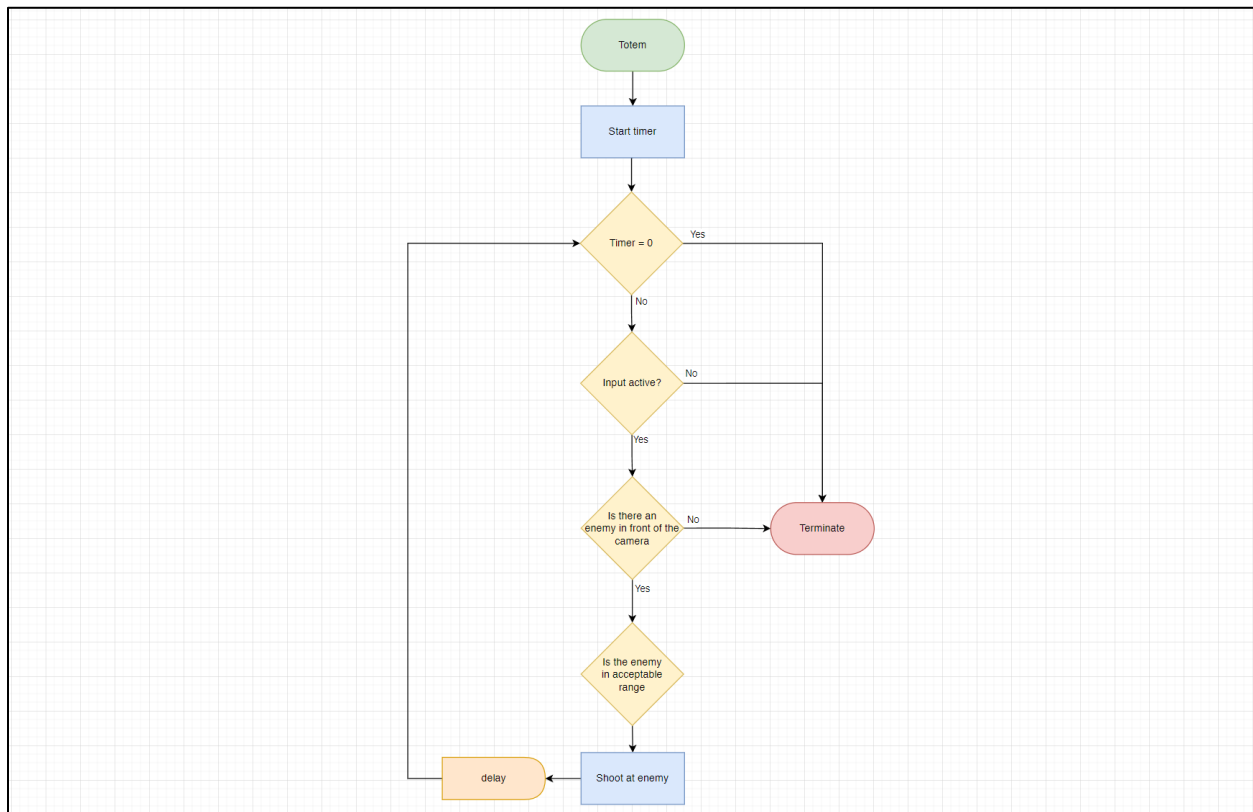
Invulnerability and lifesteal



Invulnerability and life-steal item allows the player to become immune to damage for a short duration and heal for a percentage of attack damage the player does.

Invulnerability	5 sec
Life-steal	20%
Duration	5 sec
Max stack size per slot	2

Totem



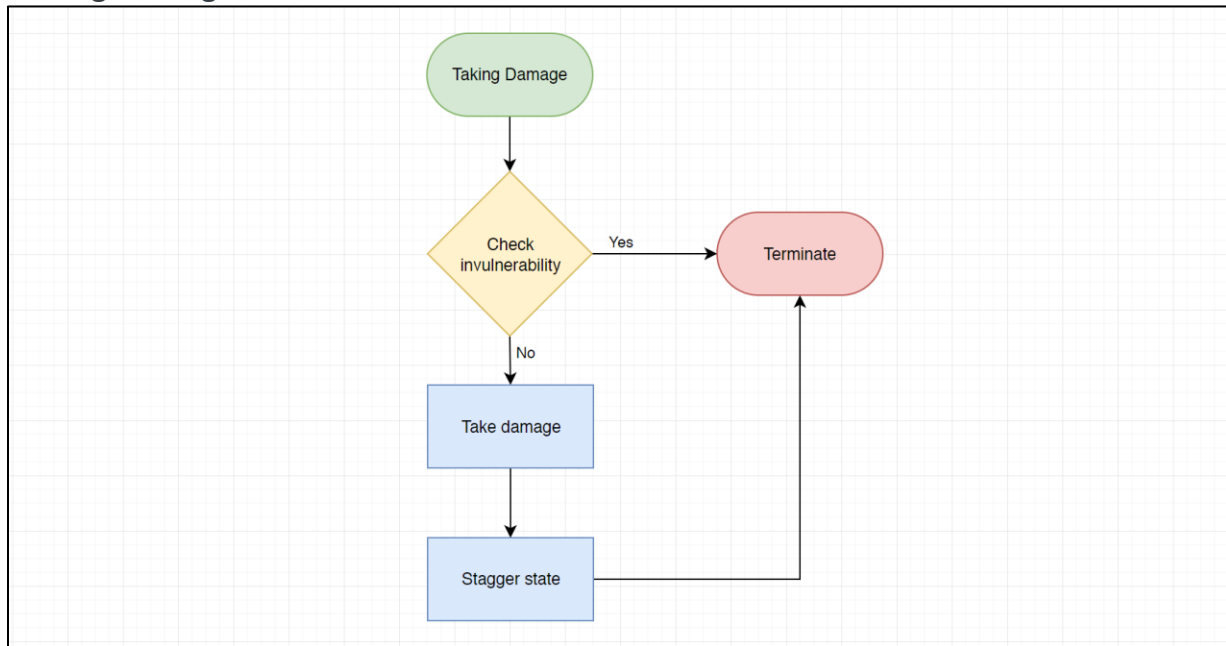
Totem activates a "gun" that shoots homing projectiles that can go towards the closest enemy in front of the player.

- The projectile bullets have homing function where they will always seek out the closest enemy.

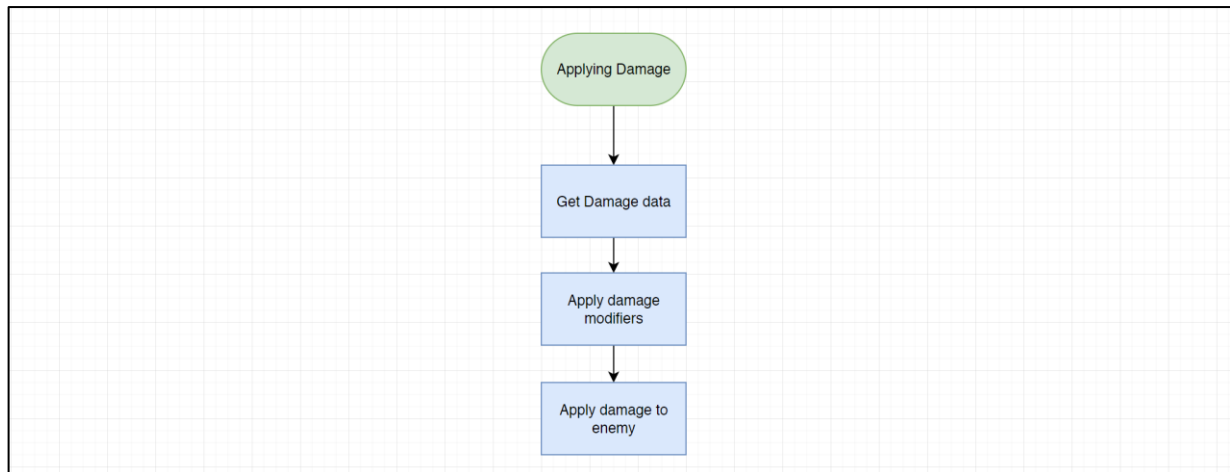
Projectile damage	1
Fire rate	0.2 sec
Duration	15 sec
Max stack size per slot	3

Damage system

Taking damage

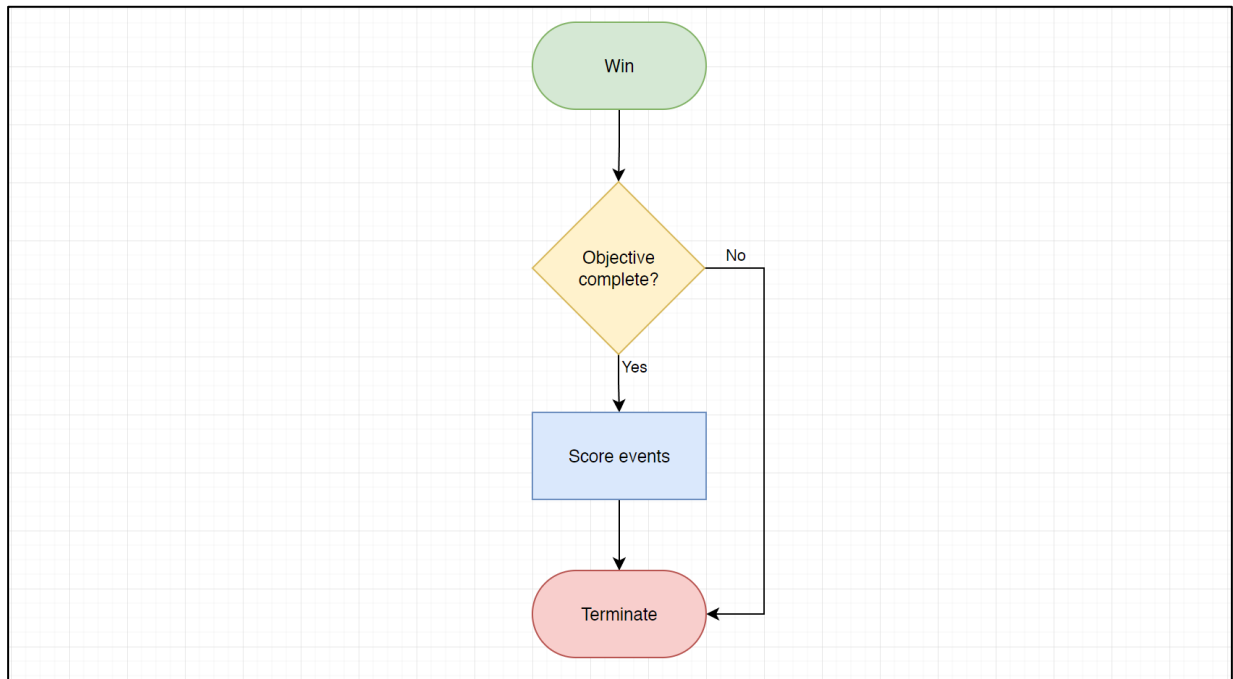


Applying damage to enemies

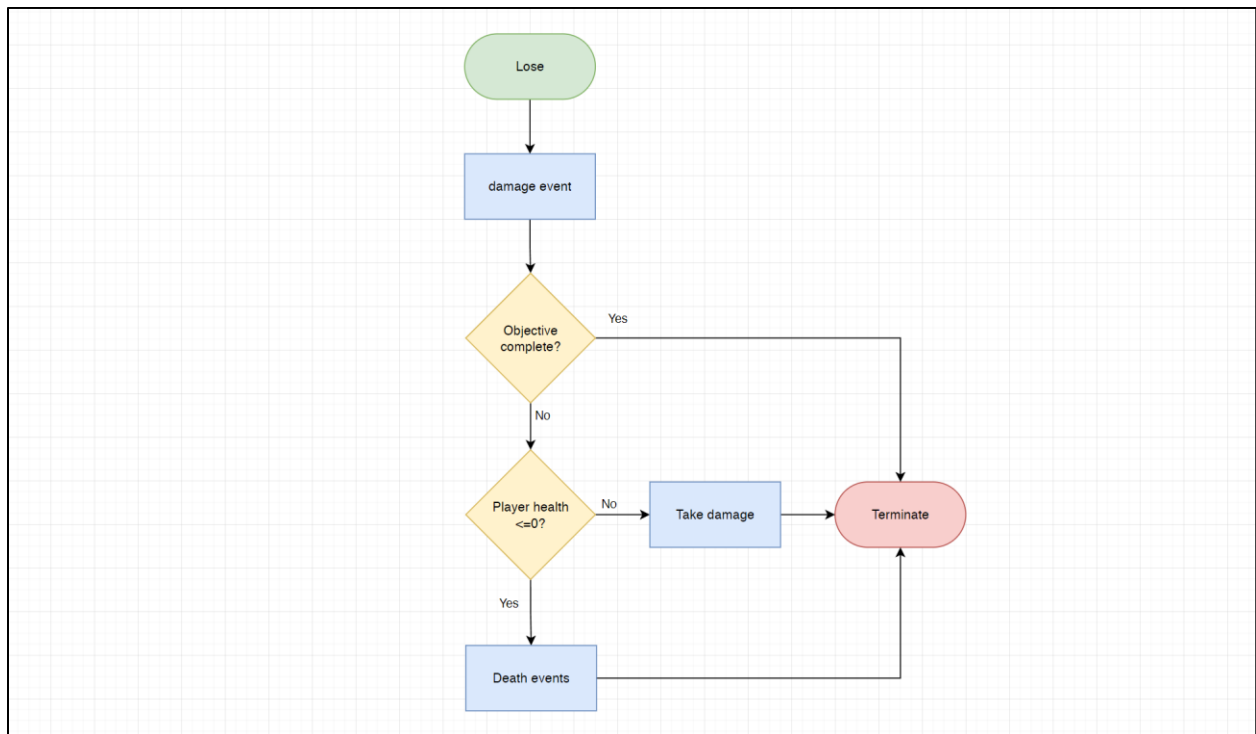


Game conditions

Win

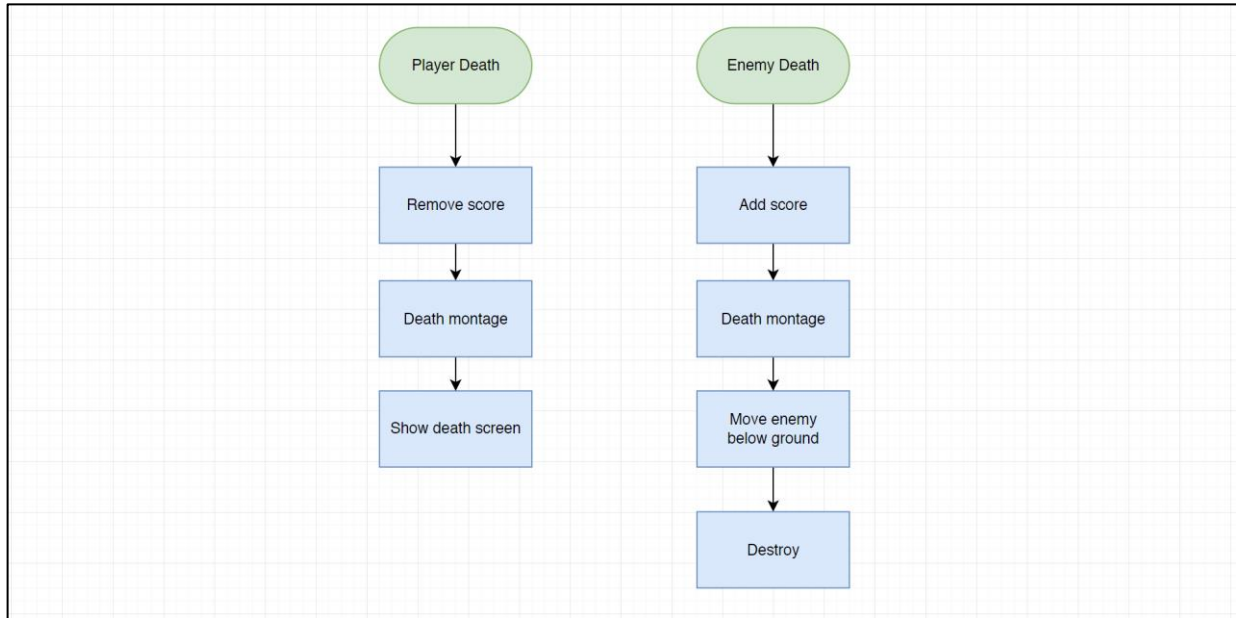


Lose



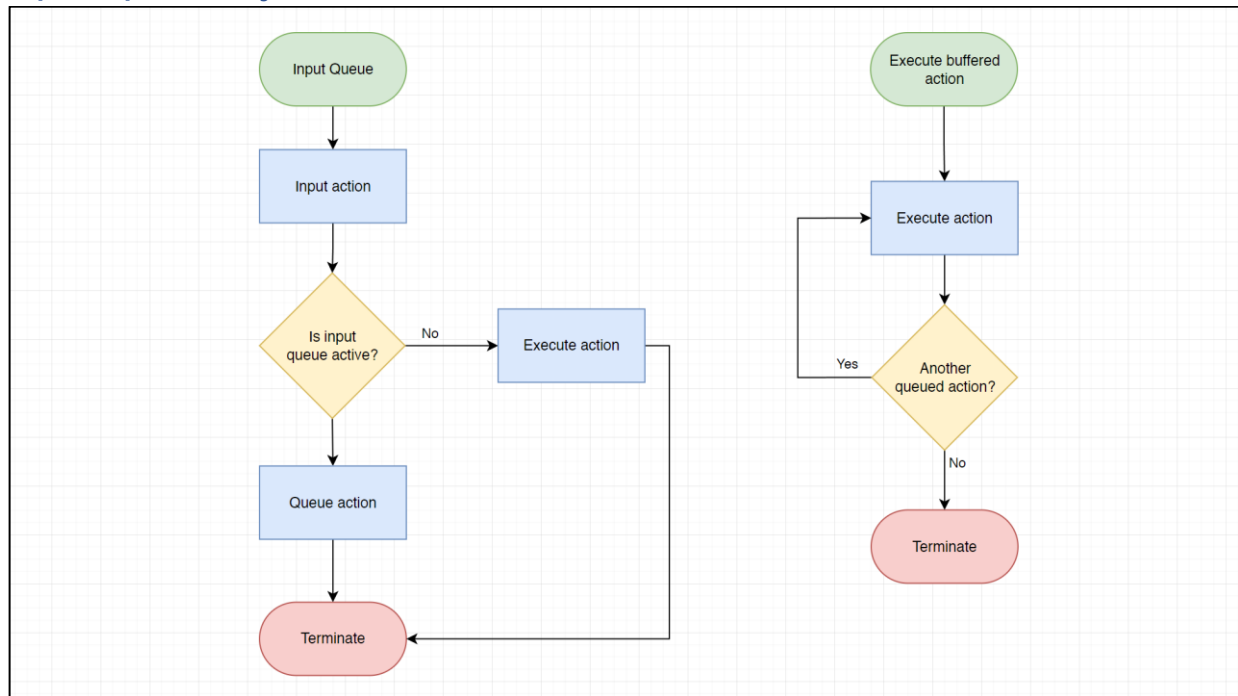
Death mechanics

Death



- On death the player could restart from the closest check point.
- If the player decided to quit, they can still press continue in the main menu and start from the check point.

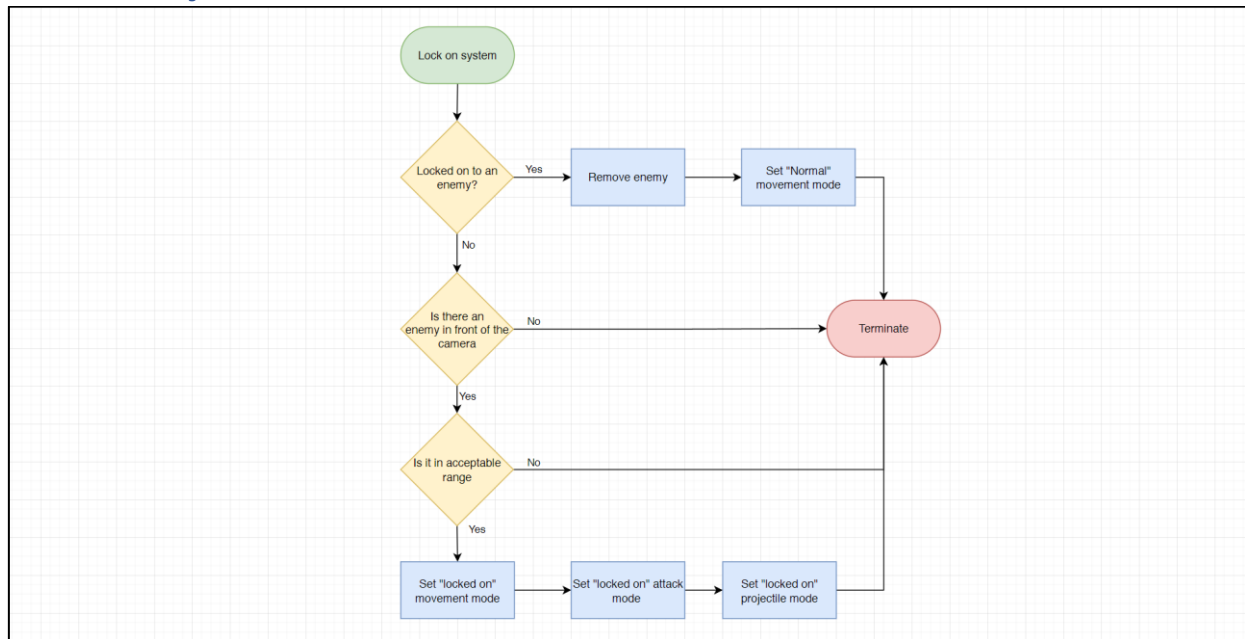
Input queue system



The Queuing system can keep one action, this makes the attacks feel smoother when the player executes it. They don't have to wait for the exact millisecond for the previous attack to end so they can start a new one, this makes it easier for player to perform actions.

- Performing another action before the queued action is performed will replace the previously queued action with newly queued action.
- The queued action can be cancelled with a dodge.

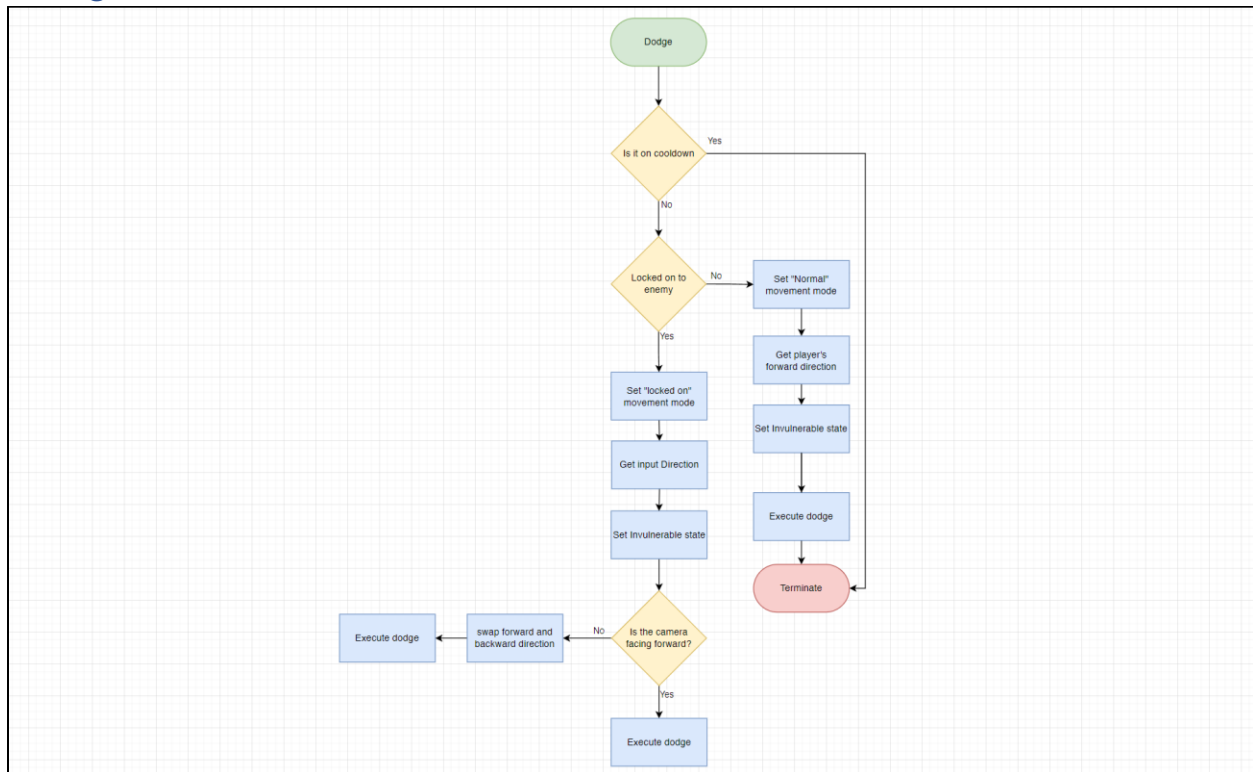
Lock on system



- The Lock on system will lock on to the closest target.
- The camera will not be locked.
- The projectiles will go towards the locked target.
- The player will always face and attack the locked enemy (if they are in the attack range).

Target Lock range	3000
Lock search radius	200

Dodge



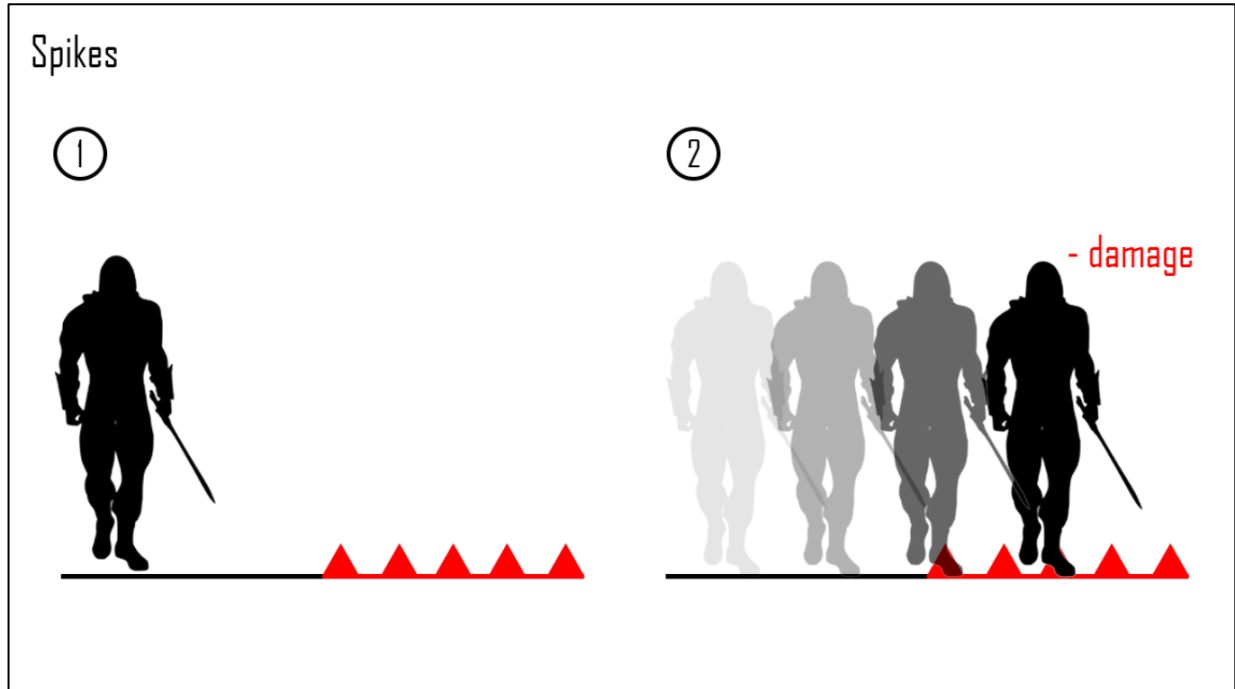
Dodge is multi-directional dash that also makes the player immune to damage for a short duration.

- The dodge will make the player invulnerable for a short duration.

Dodge range	200
Invulnerable	0.5 sec

Environmental Traps

Spikes



The spikes will pop in and out and if the player walks into it while the spike is out they will be damaged

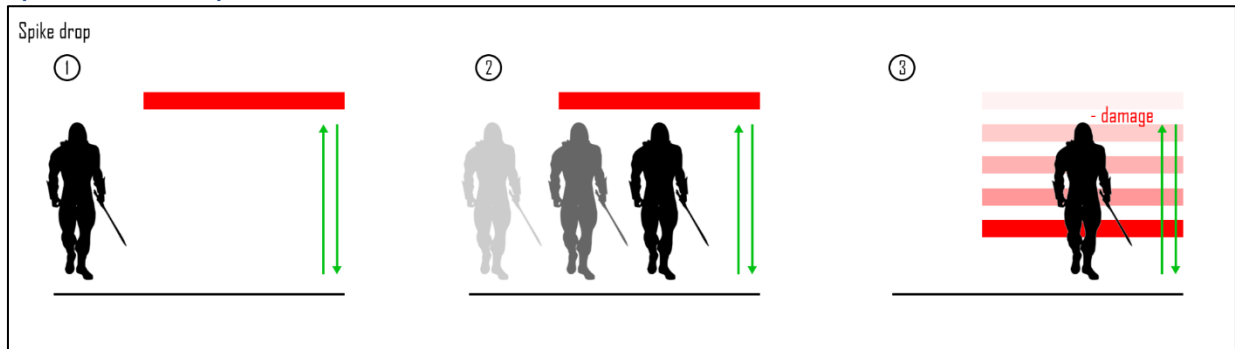
Small spike

Damage	5
Fire rate	1 sec

Big spike

Damage	10
Fire rate	1 sec

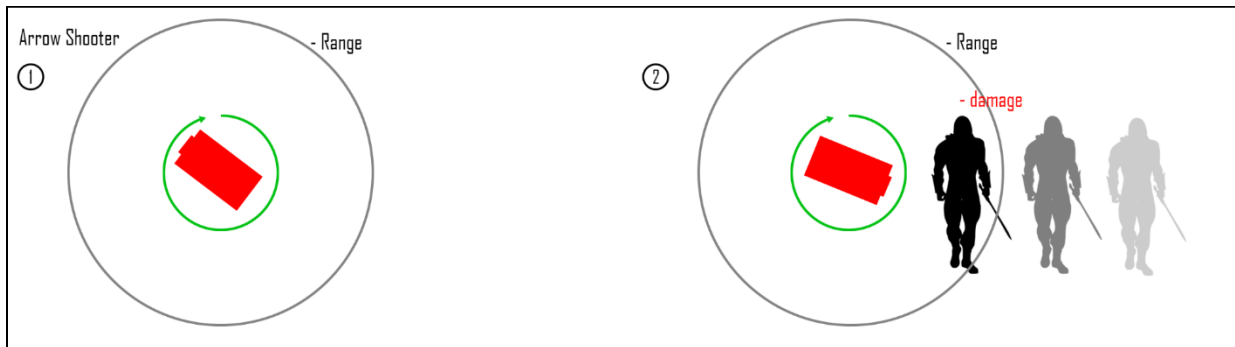
Spike/Axe drop



The Spike drop will do damage if it comes in to contact with the player. It can also work horizontally.

Damage	15
Drop speed	0.5 sec
Reverse speed	3 sec

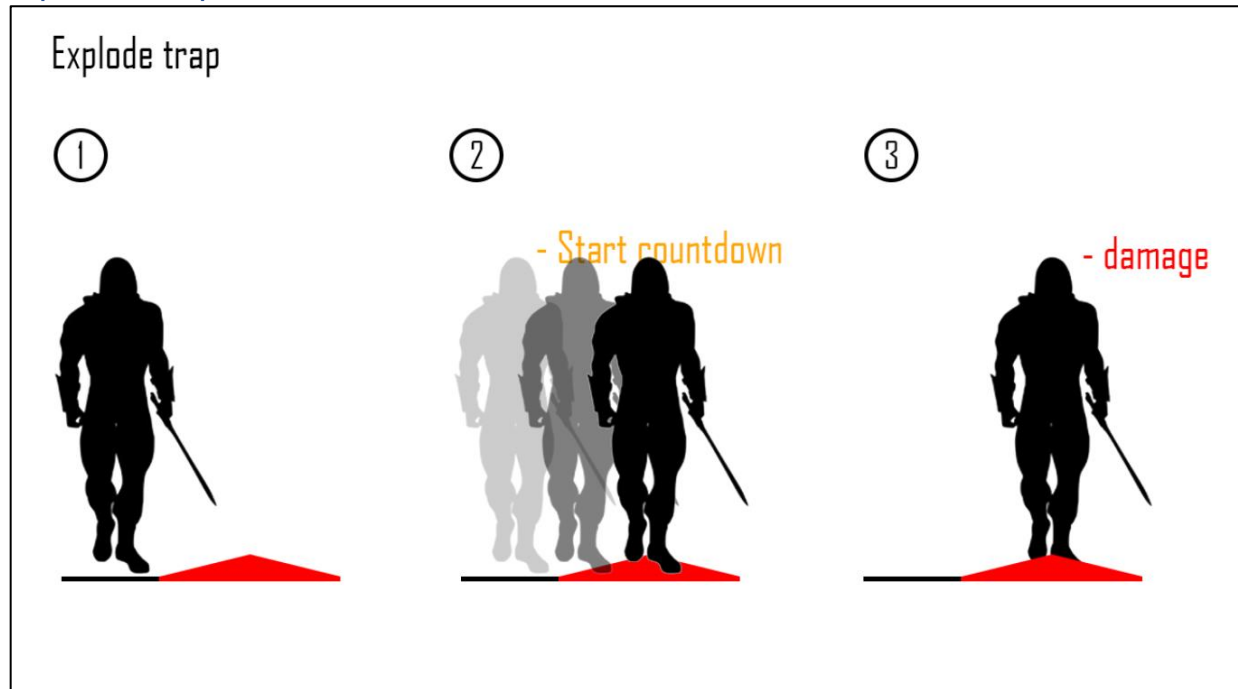
Arrow shooter



Arrow shooter will shoot projectiles towards the player if they are in a certain range.

Damage	10
Fire rate	2 sec
Shooting range	3000

Explosion trap



If the player steps on the trap it will trigger a cooldown and once the cooldown reached zero if the player is still on the trap they will be damaged.

Damage	20
Trigger time	2 sec

Enemy spawn system (waves)

- The enemy manager has 3 total waves
- Each wave will have 1 – 5 enemies
- The manager can activate and deactivate as many “Player_Arena_volume” as possible.

Set up example:

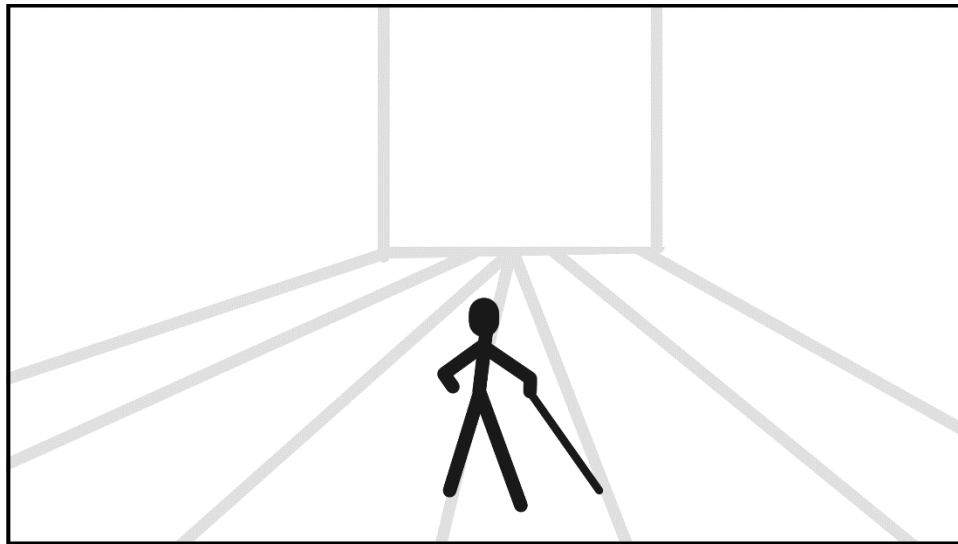
Spawner (target points)	Wave 1	Wave 2	Wave 3
Spawner 1	Enemy	No spawns	No spawns
Spawner 2	No spawns	Enemy	Enemy
Spawner 3	Enemy	Enemy	Enemy
Spawner 4	Enemy	Enemy	No spawns

Progression

Character Progression

Character progression will be provided by the addition of items, where picking them up can give the player power ups for a short duration. However, I have planned a stats-based progression, where you can choose to upgrade different attacks permanently; this can only be done if I have time after implementing the other core parts of the prototype.

Camera



- The players field of view will be 90° and they can look 50° up and down.

XP experience/ score system

Time – The time it takes to complete the level

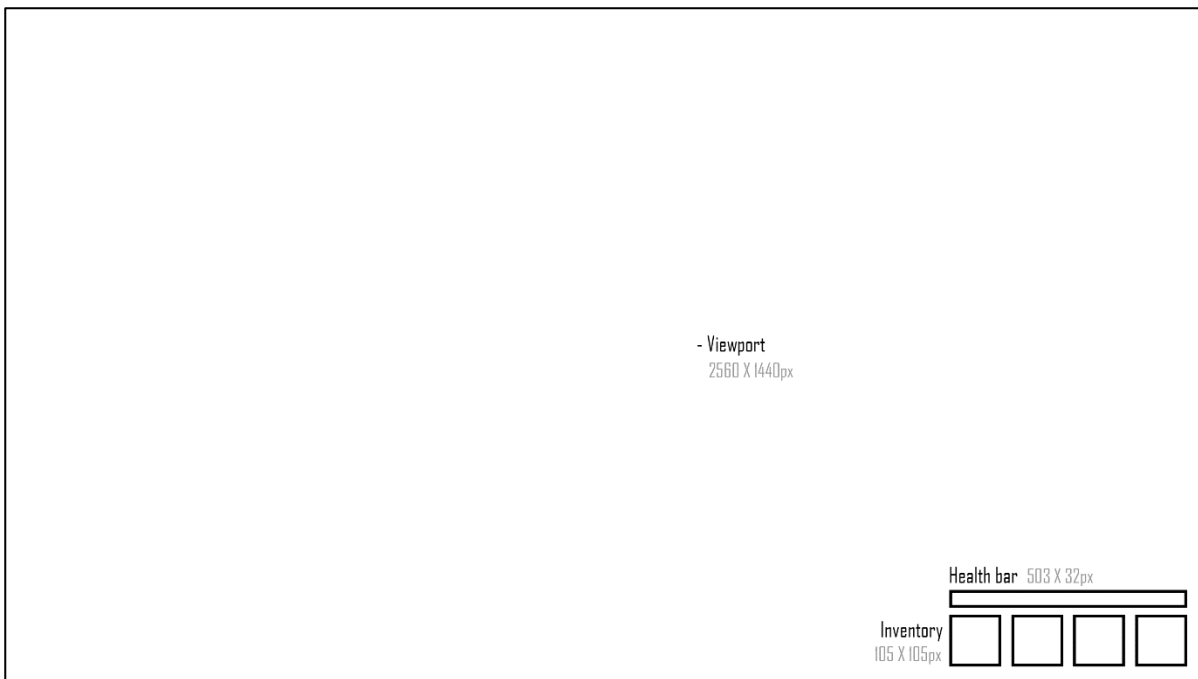
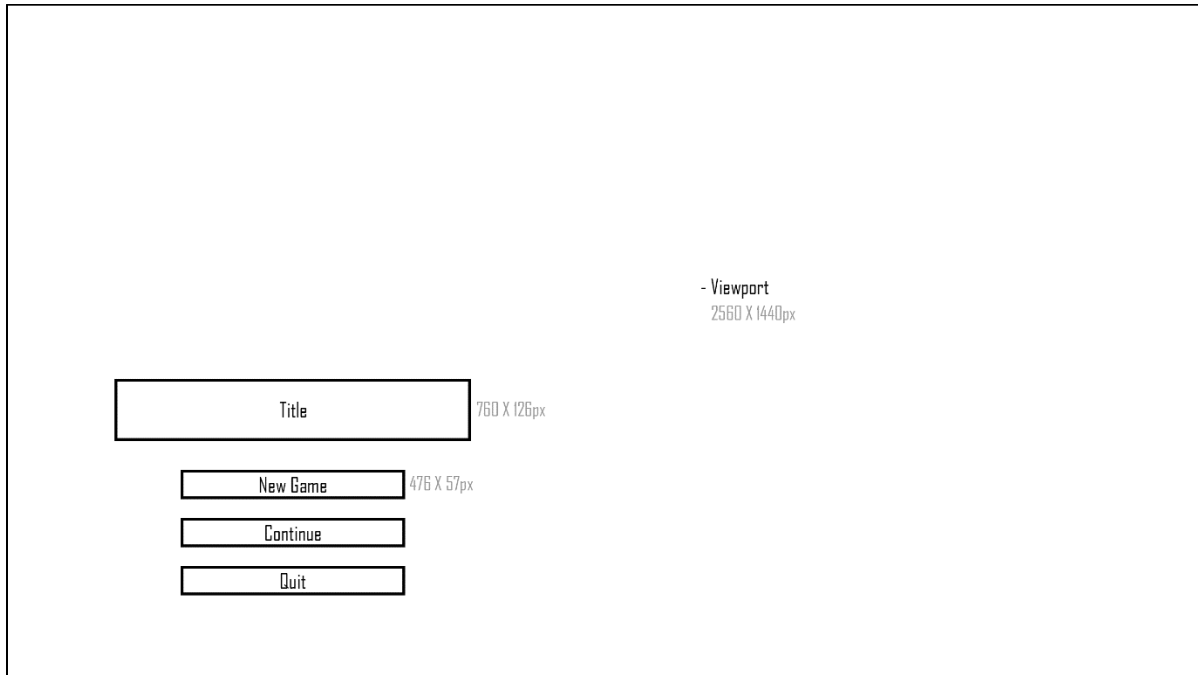
Score

XP is giving for killing enemies

- Sentinel - 50xp
- Fallen knight - 100xp
- Long hammer - 80xp
- Ogre – 500xp
- Items - 20xp

The XP can be boosted if the player can keep up the combo of killing enemies.

User Interface



- Viewport
2560 X 1440px

Resume 476 X 57px
Main Menu

Controls

Movement	W, A, S, D
Aiming	Mouse
Light attack (Combo)	Mouse 1
Heavy Attack	Mouse 2
Enemy lock-on	Q
Dodge	Space (W+ Space, S+ Space)
Interact	E
Drop item	I + mouse

- To drop an item you have to press the "i" key and then move the mouse over the inventory click the item, afterwards click on the "drop" button.