

The Boss Fight GDD v1.0

Tech Stack: Unreal Engine 5.5, Blueprints on a C++ project

Timeline: Initial Setup + 6 Weeks (Part time, Solo)

1. Summary

A single player soulslike boss encounter one approach path, one arena, one boss with two phases and a finale (scripted). Built on a Blueprint backend, a commentary UI layer (development) that shows boss state, boss thinking and small notes that show design intent.

Hook: The fight is a teacher fighting their student, this is the last form that the master is teaching and at the end you need to defeat them. Phase 1 teaching, Phase 2 Full fight, the finale.

Design Intent: Encounters specified down to timing and tuning values, layered boss logic using Blueprint state machines and data driven attack selection. Scope control is a must on a solo six week project.

2. Design Pillars

Pillar	Usage
Tutorial	The phases teach and test skills. The finale tests proficiency in skills.
Readable	The boss itself should be readable giving the player counterplay options, and the player should be able to understand why they got hit.
The teacher angle	Phase 2 should respond to player habits, while Phase 1 should observe them. (within scope)
Show the backend (Development)	The UI layer should show the backend working, what the AI is observing, how that might change its behavior.

3. Deliverables

Packaged Windows build, 3 to 4 minutes of captured gameplay with commentary UI layer, GDD, one page post-mortem report.

Priority	Features
Must (High)	One weapon player kit, boss with two phases and finale, five boss attack animations, phase state machine, Attack selection system, Greyboxed Level, Player HUD, Commentary UI, Retry Button
Should (Medium)	Player habit tracking system, Motion wrapping attacks, Camera effects, Audio Cues, Feedback system
Could (Low)	Parry, Music loop, Pause menu w/notes
Not Included	Other Enemies, Elaborate Level, Inventory System, Save System, Leveling system, Bespoke Art or Animations, Cinematics

Build vs Repurposed

Combat backend comes from a Udemy Course *Unreal Engine 5: Soulslike Melee Combat System*. Extra sections are not used.

From Course:

- Equipment and combat components
- Dodge, block, heal, lock on
- Health and stamina components
- Tag-based state manager
- Raycast hit detection, hit management
- Behavior Tree, enemy AI perception

Built for this encounter:

- Boss concept, phase, move set, timings
- Phase state machine
- Attack selector and attack Data Table
- Commentary UI layer
- Combat Arena

4. Narrative

Ping, the star student of the School of Arms wants to learn the final form of fighting from his master, Master Shift who has been refusing it continuously.

Master Shift knows that the final form is cursed and can only be shown in a fight to the death. The youthful energy of the Ping refuses to believe that and thinks Master Shift is gatekeeping the final form to restrict his potential. As Master Shift Ages he knows that he needs to pass on his final form soon, and Ping is the best student he has. Teaching this final form will relieve the burden on Master Shift's shoulders and the lesson will end in Shift being taken to heaven.

Notes: The story is loosely inspired by Kung Fu Panda and Indian Folklore. The name Ping is actually Po's (the Panda) first name in the movie and Master Shift is adapted from Master Shifu. The inspiration is also the tale of Dronacharya the Royal Guru in Mahabharata.

Gameplay Decisions	Systems	Narrative
Phase 1 is slow	Teaches the player timing and spacing as they observe the boss.	Master Shift is going through all the forms as he makes his way to the final one.
Phase 2 is more adaptive to player behavior	Punish the player for relying on the same thing repeatedly.	A teacher making sure his student knows how to fight against a smarter enemy.
Finale uses all previous moves	Testing that the player has learnt.	The final form is using all previous forms in tandem while understanding your opponent.

Delivery: No dialogue, no cinematics. Environmental, on screen effects and boss behavior moving from slow and reserved to aggressive and uncontrolled.

5. Player Kit: Ping

Health 100, Stamina 100, regen 30/s after 1.0 second cool down for both Stamina and Health. All values are subject to change based on testing.

Action	Stamina Cost	Effect
Light Attack	12	18 Damage, 3 hit chain, 8 poise
Heavy Attack	25	35 Damage, 15 poise
Dodge	20	0.7s animation, ~4m
Block	Variable	40% stamina reduction, guard break at 0
Sprint	12/s	~6.5m/s
Heal		+40 instantly, three charges total
Lock-on		Course targeting system

Standard binding on gamepad and keyboard/mouse, shown in the pause menu.

6. Boss: Master Shift

Large humanoid (~ 9 feet), single long sword, 1200 health, 100 poise. Mesh and animations from Epic's Paragon assets, chosen after an animation audit. All art assets are placeholders and not bespoke.

Nine moves using five animations (quick cut, wide sweep, overhead, lunge, ground slam). Variations created using chaining, windup holds and play rate.

6.1 Rules

Rule	Value
Distinct opening pose per attack	Hold > 0.3s
Player tracking cut off	0.25s before hit frames
Unblockable attacks	Red weapon glow
Held attacks	Yellow glow and sound, constant
Recovery from attack	0.9s Minimum

6.2 Phases

Phase	Health	Teaches	Behaviour
1 (Recitation)	100% to 60%	Spacing, dodge timing, sizing the punish	Walk, Fixed weight, long openings
2 (Correction)	60% to 10%	Reading tells, stamina discipline, staying locked on	Faster, stays closer, habit response
3 (Final Form)	10%	All of the above	Health floor of 1, fixed sequence, then death animation

6.3 Move Set

All numbers are subject to change as per testing.

No.	Move	Phase	Range	Wind-up	Damage	Recovery
1	Cross Cut	1,2	0-4m	0.55s	18	0.9s
2	Wide Sweep	1,2	0-5m 240*	0.9s	24	1.2s
3	Overhead	1,2	2-6m	1.2s	35	1.6s
4	Chain (1->2->3)	1	(As per)	0.5s gap	(As per)	1.8s
5	Overhead (Red)	2	2-6m	1.7s	35	1.6s
6	Closing Sweep	2	6-12m	0.8s	26	1.3s
7	Root Break (Red)	2	5m 360*	1.2s	30	1.8s
8	Chain 2 (1->5->2)	2	(As per)	0.5s gap	(As per)	1.8s
9	Final Form(1,2,5,6,7)	3	Arena	<0.4s	(as per)	Death

6.4 Finale

At 10% Health: 3.0s pause, health floor at 1. Player will heal and get stamina during this time, and should recover 60% in this time alone. The form runs ~8s. Dodging 5 times costs 100% stamina. Taking all hits deals 133 damage (lethal), the player can

survive hit 4 of the 5 hits if they are at 100% health (not intended). Once the sequence is complete Master Shift kneels and at this time any hit will end the fight, the health being floored guarantees that.

6.5 Poise

100 Poise, recovers 4/s after 3s without being hit. 0 poise gives a 2.5s stagger and a rest. Disabled during transitions and the Final Forum.

7. Commentary Layer

Toggleable overlay, meant for development and offers an insight into the inner workings of the backend logic.

Channel	Location	Content
State Strip	Top Left	Phase, action state, poise
Decision Readout	Below strip	Top three most effective attack w/ logic flow
Margin Notes	Right Edge	Design notes, at event triggers only

Trigger	Margin Notes (Example)
First Overhead Attack	"Slowest wind up, longest opening. Phase 1 teaches patience and gets rewarded."
Start of Phase 2	"Correction is on. Boss now responds to rolling early, holding blocks and backing off."
Start of Phase 3	"5 dodges in last 10 seconds"
Kneeling/End	"Health floor applied. The fight ends in the lesson, not the hit."

8. HUD, Camera, Feedback

HUD: Player health, stamina, heal charges. Boss bar with ticks at 60% and 10%. Lock-on reticle.

Camera: Lock-on (from course), target at boss chest, wide FOV for large target at close range. Adapted from the default Unreal Third Person Template camera.

Feedback: Wind-up signifiers (visual and audio). 0.07s hit stop after heavy attack and after hit taken, camera shake on hit taken, guard break sound.

9. Tuning and Playtest

Model: Finale should only be triggered at 10% health, 1080 damage. At ~30 (mix of light and heavy attacks) damage per opening that is 36 attacks. Assuming ~5s for each attack cycle and assuming a 70% attack rate. That comes out to ~4 mins, if the attack rate is 90% it will be ~3.2 mins. The player's effective health without automatic healing is 220 (100 plus 3 heals), enabling the player to take 7 to 13 hits.

Playtesting Metric	Target
Attempts taken to clear (gaming literate)	3 to 8
Winning attempt length	3 to 4.5 mins
Is the death explainable?	>80%
Tell recognition (Red attacks)	Within 3 experiences
Adaptive Boss AI notices	>50% of play testers
Game Performance	60 fps at 1080p, mid range GPU

10. References and Resources

God of War Ragnarök by Santa Monica Studios, The Witcher 3: Wild Hunt by CD Projekt Red, Elden Ring by FromSoftware.

Unreal Engine 5: Soulslike Melee Combat System by Unreal RPG Mastery
Paragon animations retargeted to Manny by Kingboars