DRONE

- **Playable Demo: https://drive.google.com/drive/folders/1blwhyqOz6FxD7nTtr_Dz4BLx6WM6KNit?usp=sharing**
- **Demo video: https://yuhao-xue-0410.squarespace.com/drone**

This project is a narrative-driven, first-person war simulation game featuring three core gameplay modes: the drone pilot's combat missions, his psychological evaluation as a soldier, and the hallucinations that emerge from his war-induced psychological breakdown. Developed with Unreal Engine, the game aims to explore the very definition of what a 'game' is, reveal the brutality and absurdity of war, and evoke a sincere longing for peace.

Reference

Thematic Motivation: Why make this game?

I am not simply trying to create a "war game," but to explore the boundary between the form of war and the form of a game.

In real life, I have studied numerous war reports and interviews with veterans, and two findings deeply struck me:

1.Modern warfare is becoming increasingly game-like.

Drone pilots sit behind screens, dropping bombs as if they were playing a video game.
Electronic warfare systems turn enemies into mere "coordinates."
One soldier said in an interview, "It felt just like playing Call of Duty."
Warfare is being gamified, and games in turn are numbing our perception of killing.
This made me start questioning: What truly defines a game?

2.PTSD among real soldiers.

Many drone operators have never set foot on the battlefield, yet they suffer from severe PTSD.
I realized that remote killing is not easy—it merely hides the trauma deeper within.

Mechanic Inspirations: Drawn from Reality and Classic Works

1. Drone Control Mechanism

Inspired by real drone operation systems (such as DJI), military references, and my own hands-on control experience.

2. Psychological Measurement Room Mechanism

Inspired by K's Baseline Test in Blade Runner 2049.
I transformed this concept into gameplay—allowing players to personally experience the process of "turning from a human into a tool"under time pressure and psychological stress.
At the same time, I introduced the ocean as both a visual and mechanical metaphor (see Art Inspiration section for details).

3. Tunnel Flight Mechanism

Inspired by the Icarus Wings flying sequence in God of War III.
In that scene, Kratos soars at high speed through a narrow tunnel, dodging fireballs; he cannot stop, only push forward—emerging from the tunnel to deliver a fatal blow to the Titan.
I completely reversed this "thrill level" into a psychological descent into hell:

the player's inability to stop = inability to escape guilt;
the faster the flight = the deeper the fall;
the destination is not victory, but damnation.
👉 It is still flight—but in my game, it no longer symbolizes power, but corruption and fall.

Background Story

In the conflict between **Vilderan** and **Costania**, low-altitude drones have become the centerpiece of warfare. The player takes on the role of **Alyosha**, a drone pilot hastily conscripted into service. From his operation console far behind the front lines, he surveys the battlefield through a monitor, commanding drones to release their payloads.

Within the fervent atmosphere of the military camp, Alyosha gradually grows numb — "Drone strikes feel just like playing a game."
Yet as the missions grow increasingly absurd and the targets more ambiguous, **hallucinations and guilt begin to infiltrate his consciousness.**

Every flash on the screen signifies the extinction of a life.
—No matter how much it resembles a game, **drone warfare is still killing.**

Artistic Inspiration: Visuals as Narrative and Psychological Structure

1.Drone UI Design

I drew inspiration from real combat footage captured by military drones.

2. The "Sea Level" Design in the Psychological Measurement Room

- ***Inspiration 1:*** The Psychological "Flow" State

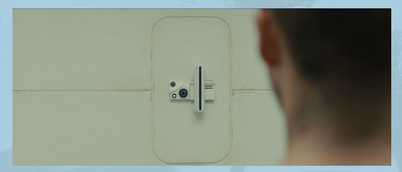
I wanted to depict the protagonist entering a state of intense focus and near selflessness during the test— **forced to concentrate, forced to obey** —just like K in Blade Runner 2049.

- ***Inspiration 2:*** The Scene of Kaneki Sitting on the Ocean in the Tokyo Ghoul Opening

Here, the ocean is not just a scene, but a **symbol of the protagonist's inner self.**

By merging these two inspirations, I designed the sequence as follows:

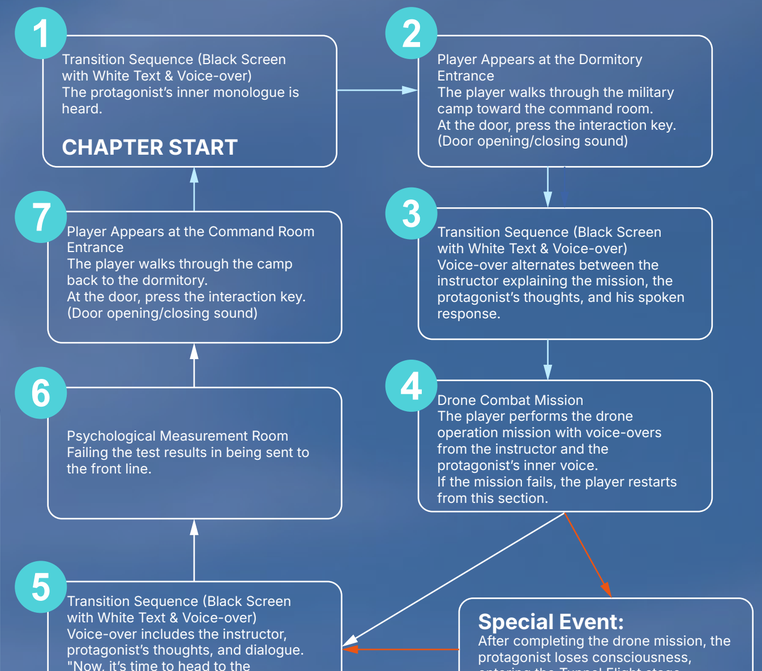
* Space dissolves → the protagonist enters a flow state
* The sea surface emerges → the protagonist's inner world surfaces
* The protagonist sits in the chair → there is no escape, only confrontation with oneself



3. Elements in the Hell Tunnel Scene

I drew inspiration from **Vlad III, the Impaler,** and his notorious method of **impalement execution.**

GameFlow



StoryLine

CHAPTER 1

From "Game" to "Killing"

- ***Story (Summary)***

A rookie drone pilot takes on his first mission—following his wingman to bomb enemy targets. Amid the "video game–like" destruction, he gains a false sense of glory, but later faces the reality of killing for the first time during a psychological evaluation.

- ***Mechanics (Keywords)***

Free exploration within the military camp
Basic drone operation tutorial (follow the wingman and drop bombs)
Cooperative drone combat (wingman self-destructs → player finishes the target)
Combat rewards and praise (system feedback builds *positive conditioning*)
Psychological Measurement Room
Black-screen voice-over transitions (protagonist's inner voice + instructor's indoctrination)

- ***Characters***

Alyosha — protagonist, drone pilot
Peter — drone wingman operator
Instructor / Commander — issues orders and instills the ideology of glory
Squadmates — represent collective fanaticism and military order

StoryLine

CHAPTER 2

From “Glory” to “Guilt”

- *Story (Summary)*

Alyosha carries out a drone mission alone—first executing a fellow deserter, then rescuing an enemy prisoner. Torn between conscience and command, his mind begins to collapse, and he falls into a hellish tunnel of hallucinations.

- *Mechanics (Keywords)*

Drone patrol and trench exploration
Forced execution of friendly Deserter A (player must press the key)
Rescue of enemy soldier B (throwing water, using medkit, escorting)
Floating typographic art (can be shattered to trigger inner voice and trauma memories)
Hallucination triggers (distorted environments, ground cracks, giant swords) [not yet implemented]
Tunnel flight stage (auto-forward, high speed, hellish obstacles, auditory hallucinations)

- *Characters*

Alyosha — the moral core torn apart
Deserter A (Friendly) — a war-weary soldier who says, “I just want to go home and see my mother,” but is executed under orders
Surrendered Soldier B (Enemy) — an enemy captive whom Alyosha is ordered to rescue, sparking an inner conflict of values
Instructor / Commander — cold and commanding, enforcing absolute obedience
Demon — appears in the tunnel hallucination, symbolizing temptation and spiritual decay
Mother, Civilians, Voices of the Dead — heard during the tunnel hallucination, echoing Alyosha’s guilt and triggering emotional breakdown

CHAPTER 3

From “Human” to “Drone”

- *Story (Summary)*

In his hallucination, Alyosha carries out his final mission—using a drone to strike enemy armored units. During the operation, tanks and vehicles morph into school buses and merry-go-rounds before his eyes. He refuses to kill, but under relentless orders, his will collapses. In the end, he loses his humanity and becomes the war machine itself.

- *Mechanics (Keywords)*

Hallucinatory camp (soldiers turn into faceless figures, appearance of the “Flesh Tree”)
Model and environment transitions (Reality ☒ Hallucination)
Entering drone mode transitions directly into a hallucinatory battlefield map
Armored vehicles → school buses; tanks → merry-go-rounds (the player realizes they’re destroying families, not just enemies)
If the player refuses to obey, the commander enforces the strike through verbal aggression and command pressure
Final psychological evaluation and ending cutscene (fusion of man and machine, medals, cameras, and hollow eyes)

- *Characters*

Alyosha — completely broken, stripped of self and humanity
Commander — embodiment of command and the machinery of war
Demon — symbol of descent into hell
Voices of Children and Mothers — manifestations of innocence and conscience
Faceless Soldiers — symbols of dehumanization and loss of identity
Mother, Civilians, Voices of the Dead — heard during the tunnel hallucination, echoing Alyosha’s guilt and triggering emotional breakdown

Campaign Progression Map

MDE Overview

A multi-mechanic role-playing game where players immerse themselves in the journey of a drafted drone pilot, experiencing his missions and psychological collapse on the battlefield.

MDE (Drone Operation)

A multi-mechanic role-playing game where players immerse themselves in the journey of a drafted drone pilot, experiencing his missions and psychological collapse on the battlefield.

Mechanics: Perform highly realistic remote military missions

1.First-Person Drone View (FPV UI)
The player observes the battlefield through the screen without direct contact with reality.
Adopts a realistic drone control interface layout (camera feed, signal, distance, UI elements, etc.).
Simulates the “calm and detachment of remote killing.”

2.Multiple Mission Types
Precision strike (bombing and destroying targets)
Search and exploration
Airdrop of medical supplies or water
Intelligence reconnaissance

3.Controls (Realistic Flight Feel)
WASD: horizontal movement
CTRL / SPACE: descend / ascend
SHIFT: boost (emergency maneuver)
Number keys 1 / 2 / 3: select bomb / medical pack / water
Left mouse button: drop item
Minimap component: shows allies, enemies, objectives, and terrain

4.Bomb Physics and AI Behavior
Realistic Ballistics: Bombs follow a delayed trajectory affected by gravity and inertia, requiring players to account for timing and distance when aiming.
Reactive Enemies: Hostile units detect the drone’s presence and attempt to evade before impact.

5.Commander Voice & Mission Constraints
The commander issues real-time orders via radio, emphasizing obedience, efficiency, and results.
Hesitation or failure to execute commands leads to reprimands or punishment.

6.Reward and Punishment System
Success or kills → points, medals, commendations
Failure, collateral damage, or hesitation → punishment, retries, criticism

7.teractive Elements on the World Map
Colliding with floating text triggers its disappearance and plays corresponding voice lines.

All these mechanics serve one core purpose:
To provide players with a highly realistic drone operation system and mission structure.

Dynamics

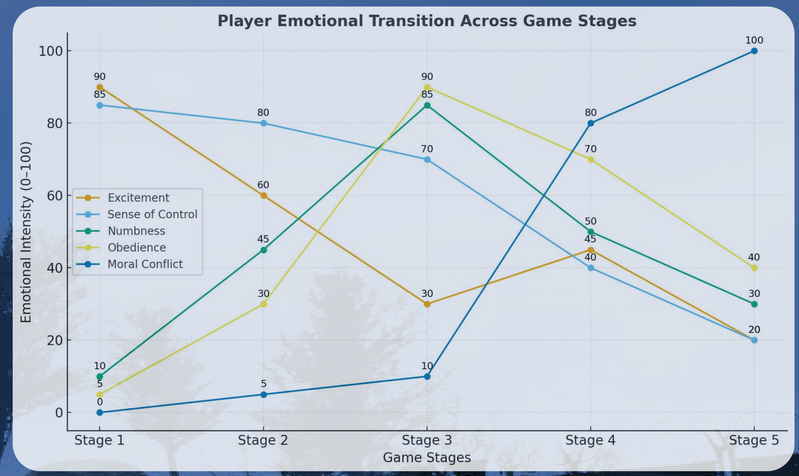
1.Tactical Decision-Making and Spatial Control
Observe the minimap → plan routes.
Analyze enemy movement → predict their trajectories.
Control altitude, position, and relative speed → find the optimal height and speed for the current mission, balancing battlefield visibility with target movement for accurate bombing.

2.Behavioral Conditioning and Worship of Efficiency
A transformation from thinking → habit → mechanical execution.
A process of conditioning from human judgment to programmed efficiency.
An internalization from obedience under pressure to actively pursuing efficiency and superiors’ approval.

3.Player’s Tendency to Collide with Floating Text Art
After killing a fellow veteran soldier under command in Chapter 2, floating text art appears on the main map (inspired by What Remains of Edith Finch).
Players tend to actively collide with these text pieces to hear the protagonist’s inner voice and feel the absurdity of the battlefield.

Final Dynamic Outcome:
The player becomes conditioned by the mechanics—acting more efficiently, stopping to think less often, and becoming increasingly machine-like.

Emotions



Realistic UI and Accurate Control Feedback → Sense of immersion and control. Bombing and hitting targets → Sense of excitement.

As the player’s skill improves, they gradually change: Bombing becomes more precise; Enemies are no longer seen as humans → just “targets”; A sense of numbness begins to form.

Player hesitates → gets scolded. Player follows orders → gets praised. Efficient kills → receive rewards, merits, and compliments.

(Key Event: Killing a fellow veteran soldier) The player becomes a puppet of orders, killing one person after another.

Realize that what they destroy are not just individuals, but entire families.

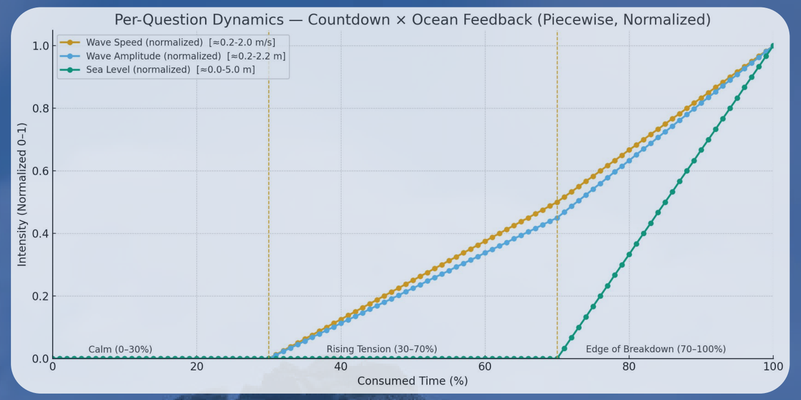
MDE(Psychological Test Room)

Mechanics

1.Right Mouse Button to Switch View Distance
Clicking the right mouse button smoothly switches between near and far views, allowing the player to clearly see the electronic display screen and the floating 3D words.

2.Countdown System and Ocean Feedback System
A rotating hourglass and a time progress bar appear in the upper-right corner.
Each question allows only 5 seconds to answer.
As time decreases, the progress bar gradually shrinks, and the ocean's state changes along with the countdown.
Design Purpose:
To create tension, force players to make rapid decisions.

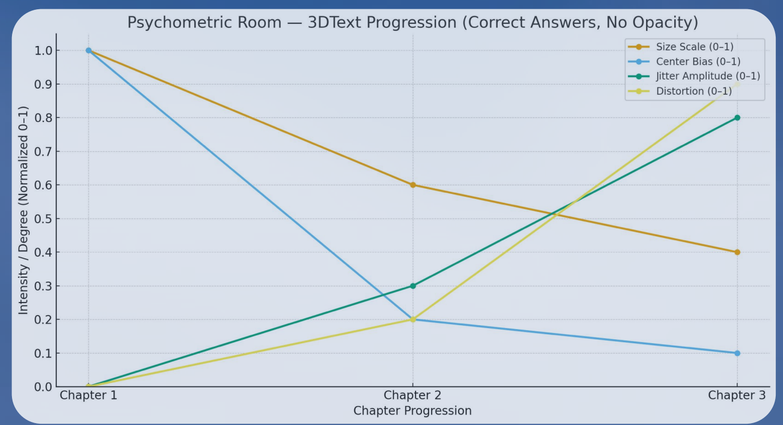
Remaining Time Percentage	Ocean Feedback	Meaning
>70%	Sea surface remains calm, waves rise and fall slowly.	The protagonist stays rational and clear-minded.
70%–30%	Wave amplitude gradually increases and flow accelerates.	Tension and anxiety rise; the protagonist's mind begins to waver.
<30%	The sea level rises significantly, and waves become violent.	The protagonist approaches collapse and is on the verge of losing control.

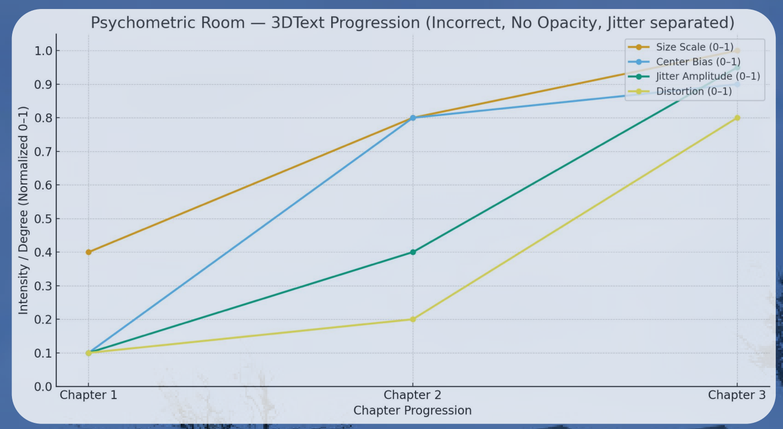


4. Spatial Dissolution
After the test begins, the room gradually undergoes visual disintegration — the walls and interior facilities of the psychological measurement chamber slowly fade away.
Once everything disappears, the protagonist is left sitting on a chair floating above the ocean, with an electronic display screen hanging down from the sky in front of them.

5. Question Difficulty Variation
As the chapters progress, the difficulty of the psychological measurement test increases:

Chapter	Correct Answers	Wrong Answers
Chapter 1	Largest, centered, stable	Smaller, fewer, distributed along the screen edges
Chapter 2	Shrinks, drifts toward the edges	Enlarges, increases in number, some occupy the screen's central area
Chapter 3	Shaking, distorted, semi-transparent	Largest, most numerous, shaking, distorted





Dynamics

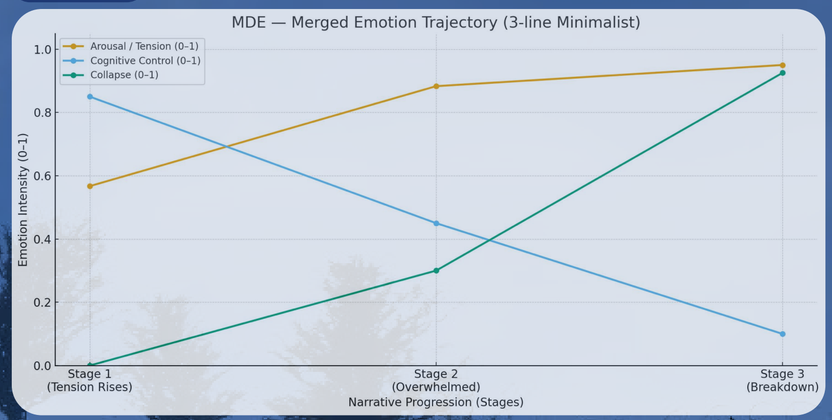
1. Rapid Obedience Driven by Time Pressure
The countdown and the rising waves create a high-pressure environment. The player instinctively speeds up their responses and abandons rational thinking to avoid punishment. Gradually, they are driven by the rhythm into a state of conditioned, reflexive obedience.

2. Loss of Control Caused by Suffocation and Fear
The sea level keeps rising, submerging the player's view. The sounds of drowning and visual interference generate an intense sense of suffocation.
Under fear, the player will:
* Be unable to see the options clearly; emotions spiral out of control
* Click randomly and answer blindly
* Regress from "answering questions" to "struggling to survive"
* Completely lose rationality and control
Result:
The player degenerates from an analytical observer into an oppressed struggler.

3. Self-Destruction Induced by Difficulty and Mental Resonance
As the story progresses and the protagonist's mind deteriorates, the system synchronously increases the difficulty — answers shrink, drift, shake, and become semi-transparent.
The player will:
* Spend more time searching → have less time left → the ocean grows more violent
* Suffer from disrupted concentration and rising anxiety
* Begin to doubt whether they can "pass the psychological test"
* Struggle between "answering within the time limit" and "insisting on choosing the correct answer"
Some may even **intentionally choose the wrong answers** to escape the violent waves and the rising sea level **(the ocean symbolizes the player's mental stability)**.

Result:
The player is no longer merely taking a test, but engaging in a psychological confrontation — both with the system and with themselves — leading gradually toward self-destruction.

Emotions



Rising Tension — "I must be fast! I can't make mistakes!"
The countdown keeps decreasing.
Waves grow larger and the sound intensifies over time.
The correct answer becomes less clear, and visual interference begins.

Urgency and Panic — "I can't handle this! I'm about to break!"
The correct answers begin to drift, shake, and shrink.
As the countdown approaches 30%, the sea level rises.
Visual noise, wave sounds, and screen shaking start to disrupt the player's control.

Control Collapse and Desperation — "Forget it! I'll just click anything!"
The correct answers are mixed among the wrong options.
The sea level keeps rising and never recedes.
The view is obscured by water, accompanied by drowning sounds.
The waves and question rhythm leave no time for recovery.

MDE(Tunnel Flight Level)

Mechanics

1. Control and Movement
Automatic forward motion — cannot slow down, stop, or move backward.
The player can only control up, down, left, and right.
Speed gradually increases, creating constant pressure.

2. Obstacle System
Static: corpses, weapons, stone pillars, skeletons, lava.
Dynamic: flying fireballs, long hell worms extending from tunnel walls, and hands reaching out from the walls.

3. Collision Feedback
HP -1 (initial HP = 5).
Temporary invincibility (1 second) + collision ignored.
Plays particle sparks, smoke, and metal impact sounds.
Drone sways left and right upon impact.

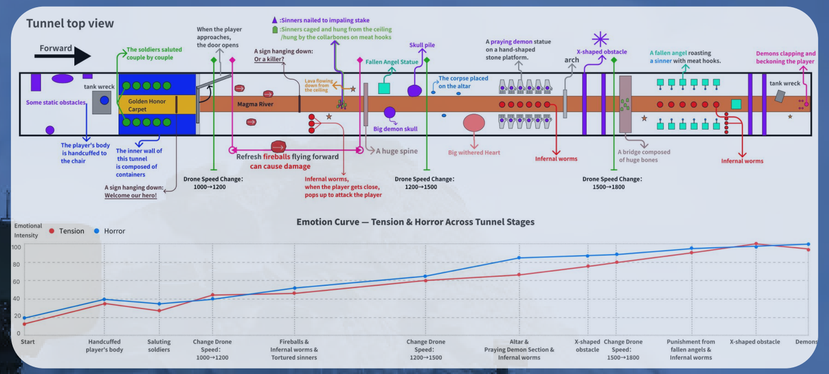
4. Audio and Voice-Over Triggers
Voice-overs include: whispers of the dead soldiers, commander's orders, instructor's shouts, wounded soldiers' accusations, mother's cries, demon's laughter, and the protagonist's self-denial.
Trigger methods: position-based triggers + collision triggers.

Dynamics

1. Forced Forward Motion + Inability to Stop ⇒ Creates a Sense of Powerlessness and Being Driven Forward
Dynamics: These mechanics continuously push the player forward without any room for choice, forming a psychological process of being "driven by fate into the abyss."

2. Increasing Speed + Rising Obstacle Density ⇒ Sustained Growth of Tension
Dynamics: The player can handle it at first, but soon becomes overwhelmed, entering a rhythmic curve of "adaptation → tension → panic."

Emotions



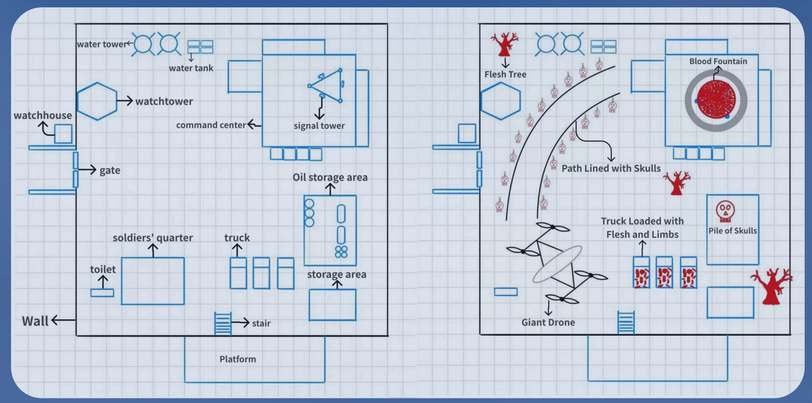
MDE(Explore the Camp)

Mechanics

1. Free Movement and Observation
WASD for first-person free walking; drag the mouse to rotate the view.
The player can hear radio broadcasts, comrades' conversations, and footsteps.
Can interact with doors to enter the command room or dormitory.

2. AI Soldiers' Patrol and Daily Behavior
Soldiers automatically navigate and patrol along preset routes.

3. Hallucination After Returning from the Tunnel Flight Mission
After returning from the tunnel flight stage, the protagonist begins to hallucinate — the camp's interior changes drastically.
Distorted graffiti and symbols appear on the ground and walls; approaching them triggers whispers from hell.
Getting close to particularly disturbing graffiti causes intense heartbeat sounds to play.



Dynamics

1. Appearance of Hallucinated Paintings → Familiar Environment Corroded, Causing Cognitive Dissonance

2. Approaching the Paintings → Triggers Whispers, Visual Distortion, and Sound Effects → Forcing the Player to Experience the Protagonist's Mental Fracture
A self-driven loop of *fear + curiosity* compels the player to willingly delve deeper into the hallucination — essentially entering the protagonist's inner mental world.

Emotions

1. Loss of Agency
The realization of being just a cog in the war machine — powerless to change anything.

2. Uncanny Horror
Fear arises from seeing the once-familiar military camp distorted and corrupted.

3. Curiosity + Pain
The player knowingly approaches the horrifying paintings, as if exploring their own wounds — where curiosity and self-torment coexist.

Mechanics As Metaphor

Mechanic 1: First-Person Drone View (FPV)
Metaphor: The psychological distance of modern warfare—killing feels like playing a game, and indifference becomes a trained response.

Mechanic 2: Gaining Rewards and Medals for Kills
Metaphor: Killing is disguised as honor and achievement—efficiency replaces morality, and the player is conditioned into a tool of war.

Mechanic 3: Increasing Difficulty + Time Pressure + Ocean Punishment System in the Psychological Test Room
Metaphor:The rising difficulty reflects Alyosha's conscience being gradually torn apart—
in **Chapter I** he can still "pretend nothing happened,"
in **Chapter II** he "struggles to convince himself,"
and by **Chapter III** he "can no longer escape the truth."

The combination of countdown and wave pressure symbolizes both **external command and internal guilt**—a dual oppression that makes self-deception increasingly impossible.
Players shift from *thinking about answers* to merely *avoiding being submerged*, just as Alyosha shifts from *moral judgment* to *pure obedience.*

The irreversible sea level represents a conscience that cannot truly be silenced;
the more he tries to numb himself, the more he proves his awareness of guilt.

Through these mechanics, **inner collapse becomes a drowning experience the player must personally endure.**

Mechanic 4: The Drone Auto-Advances in the Tunnel Mission — No Slowing or Retreating
Metaphor: Alyosha is trapped in an uncontrollable vortex of killing.
He wants to stop, but he can't; he wants to turn back, but it's too late.
His "forward motion" is no longer a choice—it's driven by orders, medals, and the weight of past massacres.
This is the inertia of moral downfall. It's no longer him piloting the drone—war itself is piloting him.

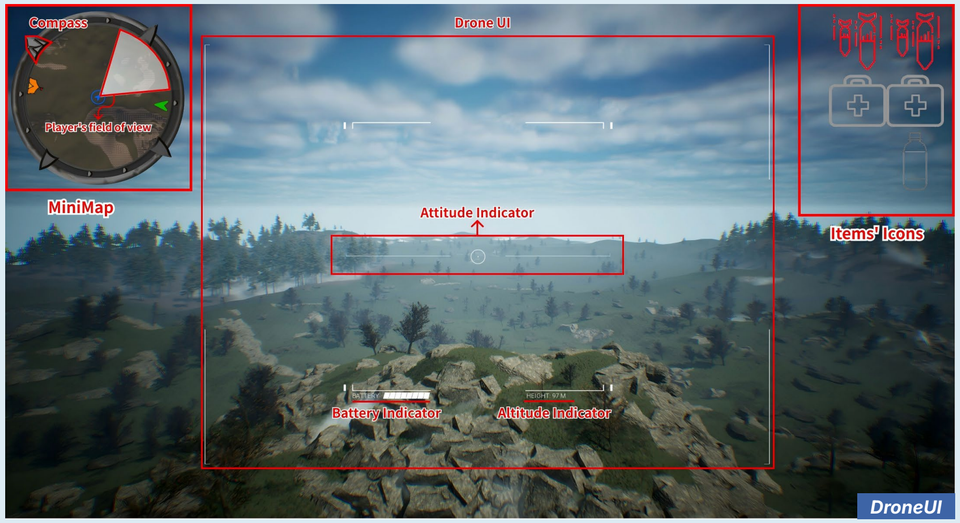
Mechanic 5: The Drone's Speed Increases, and the Tunnel Becomes Progressively Harder
Metaphor: Alyosha is trapped in an uncontrollable vortex of killing.
Metaphor: Military orders and the pursuit of merit make him kill faster and faster.
He once sought glory and willingly accelerated; now he wants to stop, but the very momentum of killing drags him into the abyss.
"The better you become at killing, the faster you fall into hell."

Mechanic 6: The Final Psychological Test Is Nearly Impossible to Pass
Alyosha's mind has completely collapsed; by logic, he should be dismissed.
Yet the military keeps him active—no one cares about his mental ruin.
He continues to operate drones because as long as he kills efficiently, he remains useful.
War doesn't care whether you suffer, break down, or teeter on suicide;
it only cares whether you can complete the next mission.
Metaphor: The army doesn't need a "person"—it needs a "function."

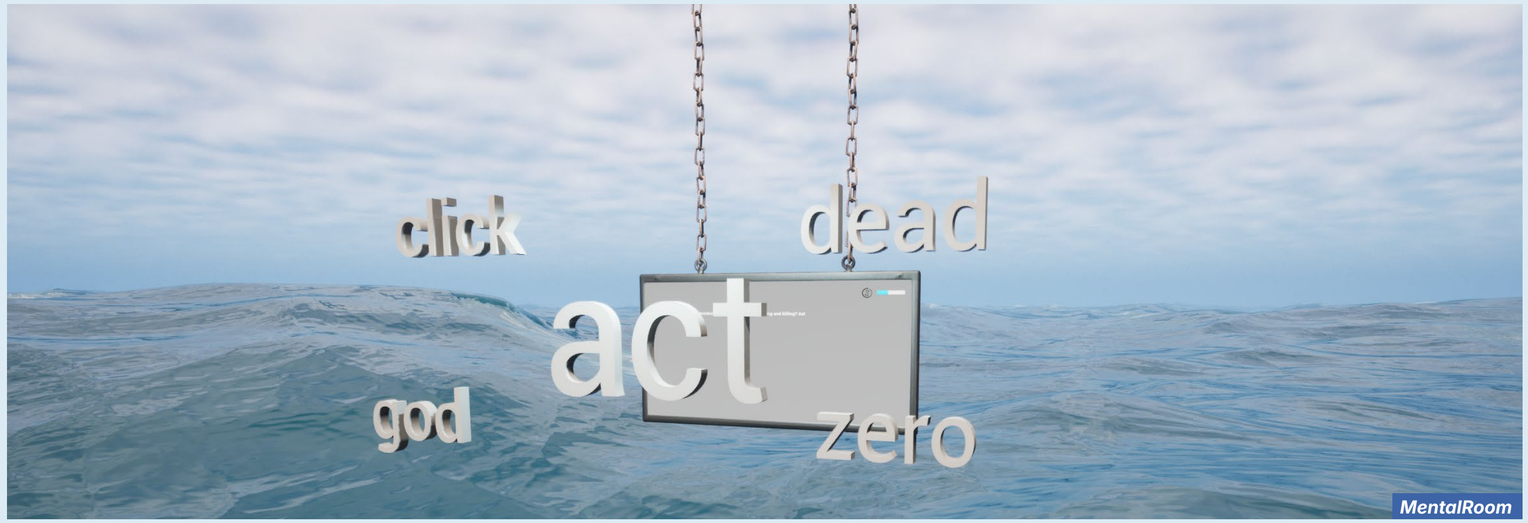
Mechanic 7: The Entire Game Trains the Player in Obedience and Efficiency
Metaphor: The game itself is a training system for manufacturing drone soldiers.
By the end, both the player and Alyosha have become the same being:
✅ Numb ✅ Efficient ✅ Obedient ✅ Thoughtless ✅ Traumatized yet functional
✅ Mechanized tools of war

This is not a story about war destroying humanity—
it's a story about how war manufactures machines.
Players think they are piloting drones, but in the end, they realize—they are the drones being piloted by war.

GameArt



DroneUI



MentalRoom

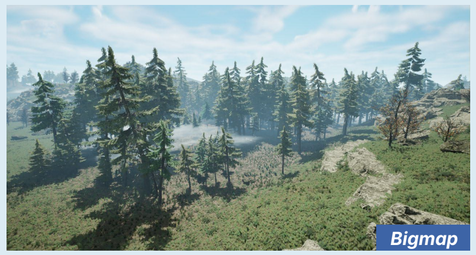

Bigmap-Base


Bigmap-Ruins of the town


Bigmap-Ruins of the town

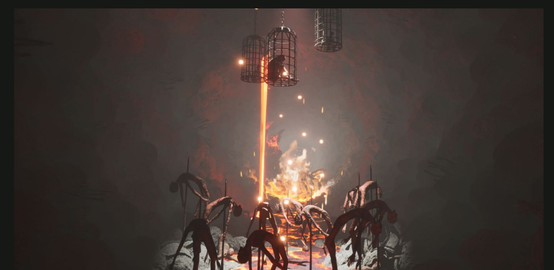
MentalRoom


Bigmap-trenc


Bigmap


Bigmap

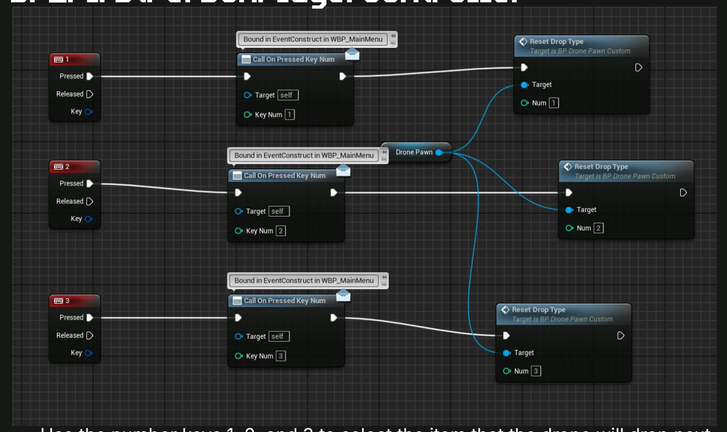
GameArt - Tunnel



GameArt - Tunnel

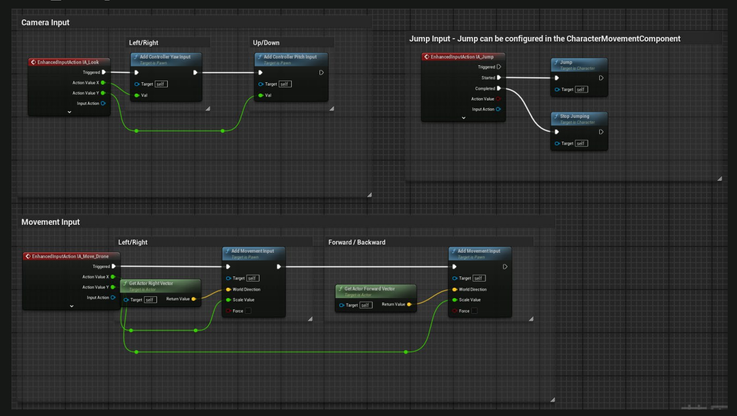
Changed Bigmap

BP_FirstPersonPlayerController



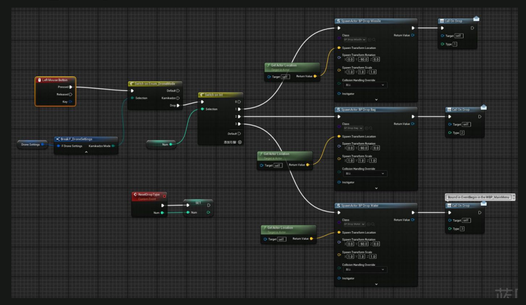
Use the number keys 1, 2, and 3 to select the item that the drone will drop next. This function is bound within WBP_MainMenu.

Bigmap(Hand_FirstPersionController)



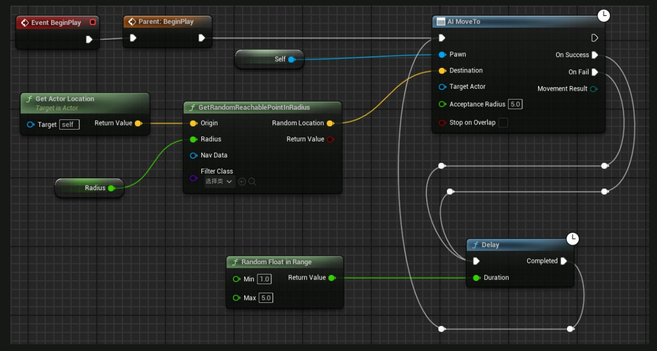
When the player is in the camp, they use **the first-person human controller.** This script includes **movement, jumping, and camera/look control.**

Bigmap(Drone)



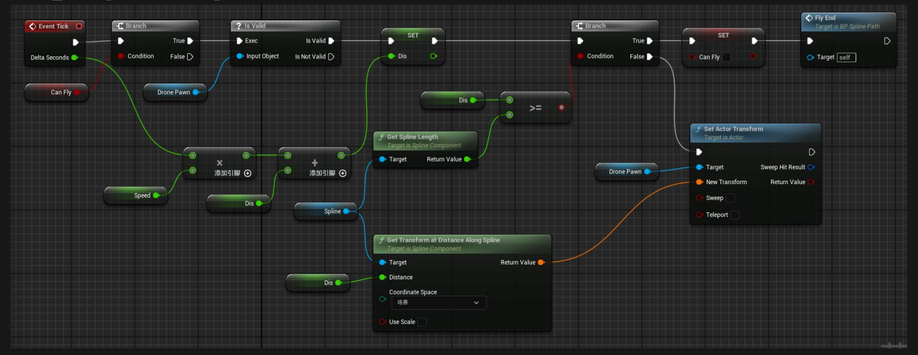
When creating the player-controlled drone Blueprint, I used the **Advanced Drone System FPV KAMIKAZE Update** plugin for the drone's movement.
I rewrote the drone's drop/bombing functionality so the drone can deploy bombs, medkits, and water.

Bigmap(BP_AICharacterBase_RandomMove)

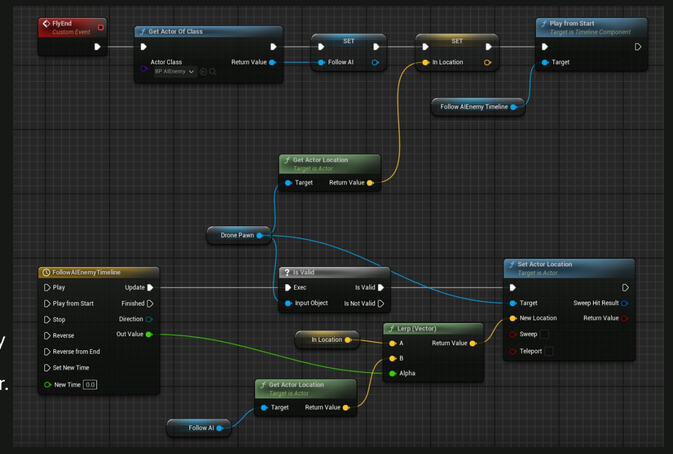


Patrolling Soldier AI in the Camp:
Within a certain radius around itself, the AI randomly selects a reachable point, moves to that location, waits for a short period, and then repeats the process.

Bigmap(BP_SplinePath)

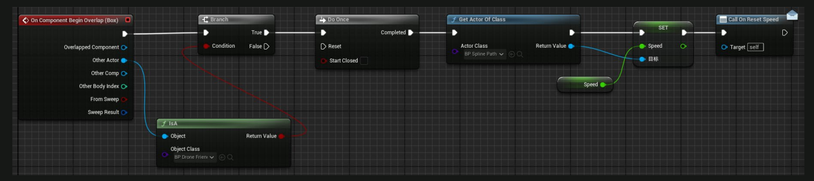


When **CanFly** is true and **Drone Pawn** is Valid, Event Tick accumulates travel distance Dis each frame using Speed * Delta Seconds. It then calls Get Transform at **Distance Along Spline** (on the Spline Component) and applies the result to the pawn via **Set Actor Transform**. If Dis ≥ Get Spline Length, the graph hits a Branch that stops the update by setting **CanFly** to false and invokes **Fly End** to finalize.



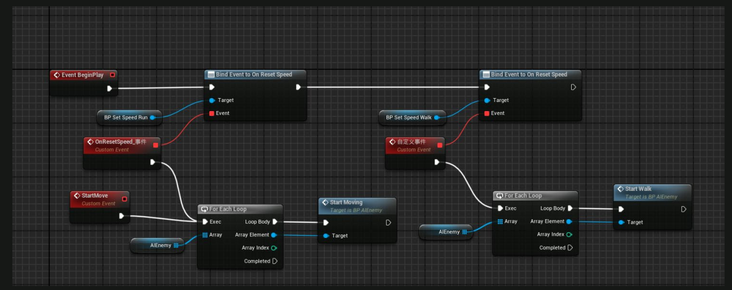
When the **FlyEnd** event is triggered, the Blueprint locates the enemy **(BP_AIEnemy)** in the scene, records the drone's current position and the enemy's position, then starts the **FollowAIEnemy** Timeline.
On each tick of the Timeline, it interpolates between the two positions using **Lerp (Vector)** and smoothly updates the drone's position with **Set Actor Location**, enabling the drone to move from its current location and pursue the enemy.

Bigmap(BP_SetSpeed)



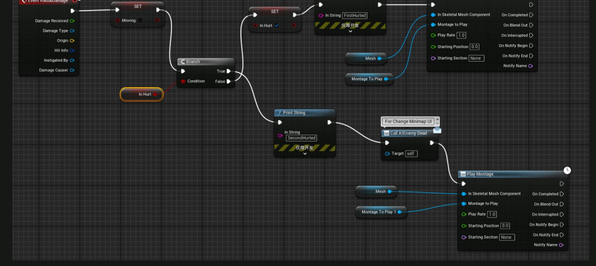
When the collision box placed on the spline line is entered by the escort drone, its **speed** is modified, and the On **Reset Speed event** is called.

Bigmap(BP_ControlAIMoving)



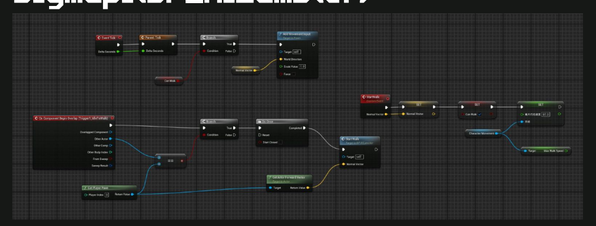
Bind two events: **ResetSpeed** from **BP_SetSpeedRun** and **ResetSpeed** from **BP_SetSpeedWalk.**
Use the corresponding event to control the **AIEnemy** movement mode **(Walk/Run).**

Bigmap(BP_AIEnemy)



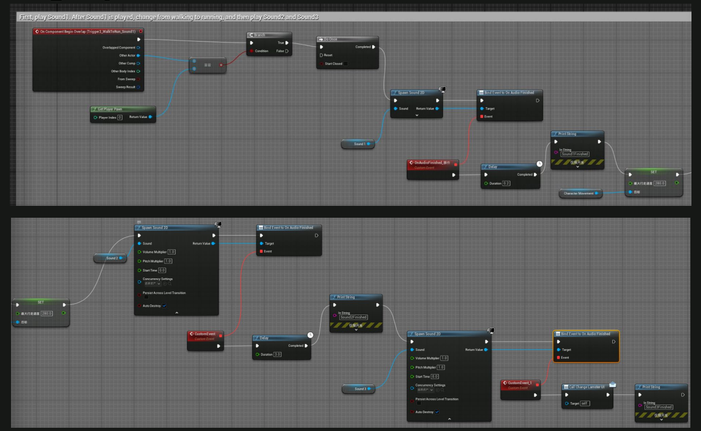
Bind two events: **ResetSpeed** from **BP_SetSpeedRun** and **ResetSpeed** from **BP_SetSpeedWalk.**
Use the corresponding event to control the **AIEnemy** movement mode **(Walk/Run).**

Bigmap1(BP_AILamster)



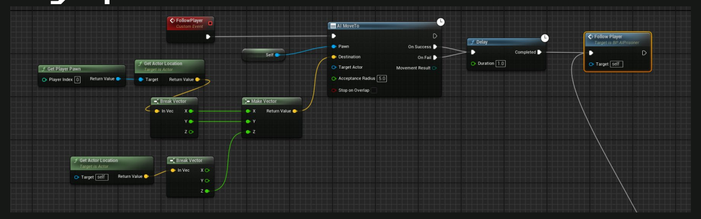
When the player enters the designated trigger area **(Trigger1_IdleToWalk)**, the AI character records its current facing direction (Normal Vector), enables walking mode **(Can Walk = True)**, and continuously moves along that direction each frame—creating a behavioral transition from **idle to walking**.

Bigmap1(BP_AILamster)



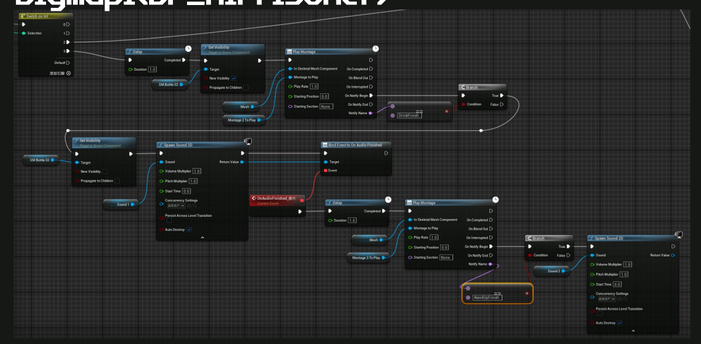
When the player collides with the collision box **Trigger2_WalkToRun_Sound:** First, **play Sound1**. After **Sound1** finishes playing, switch the AI character's state from **walking** to **running**, then **play Sound2 and Sound3.**

Bigmap1(BP_AIPrisoner)



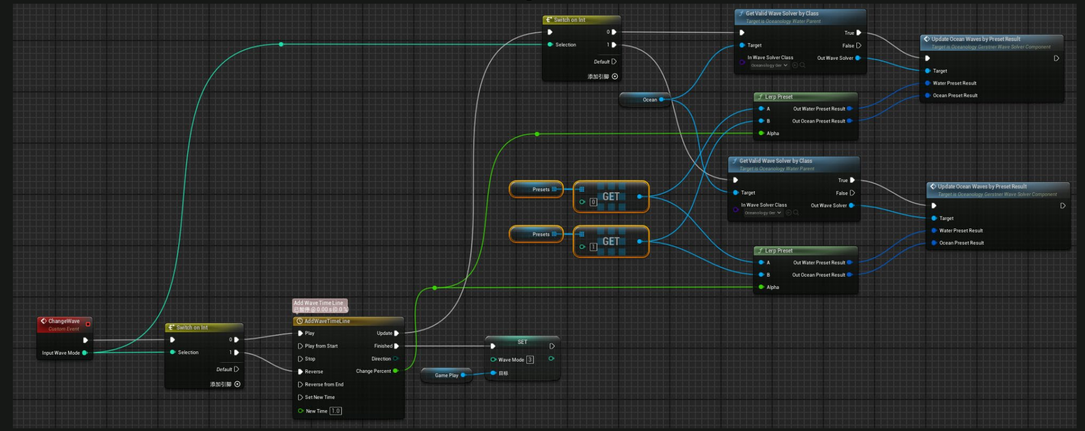
AIPrisoner updates the player's position every second and uses AI MoveTo for automatic pathfinding to move toward the player, achieving continuous and smooth following while keeping its own height unchanged.

Bigmap1(BP_AIPrisoner)



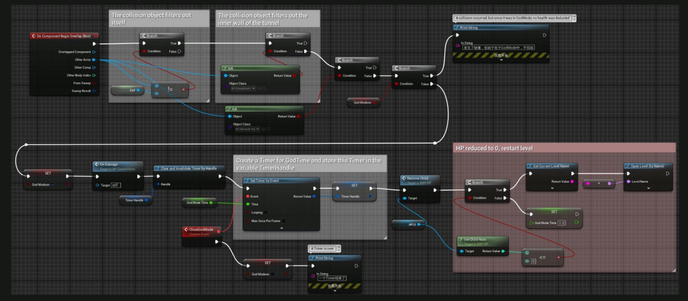
When **AIPrisoner's** damage value reaches 3, the AI character performs a complete sequence of actions — **take out the medicine bottle → drink → put it down → retract.**
Animation Notifies embedded in the Montage are used to synchronize the animation and sound effects.
Finally, the **medicine bottle model** is hidden, and an **ending sound effect** is played to create a natural and immersive healing performance.

MentalRoom(BP_RuntimeWaveManipulator)



Enable smooth blending (Blend/Lerp) between different **wave presets**.
When **ChangeWave(InputWaveMode)** is called, it doesn't switch the wave shape immediately; instead, it uses a **Timeline** to smoothly interpolate between two sets of **wave parameters**, creating a dynamic, gradual transition of the sea surface.

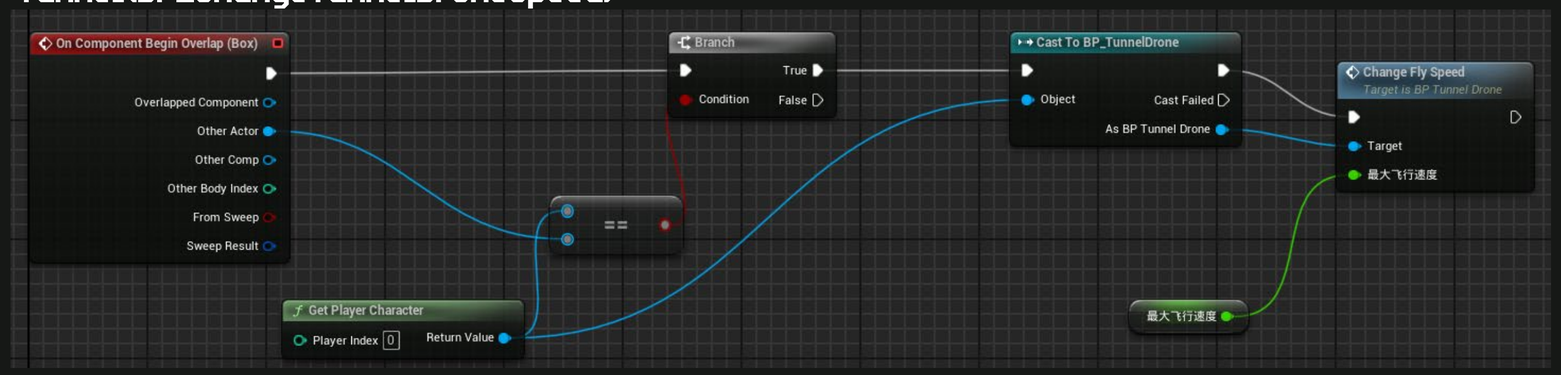
Tunnel（BP_TunnelDrone）



Hit Detection & Invincibility Window Mechanism (OnHit Damage + GodMode + RestartLevel)

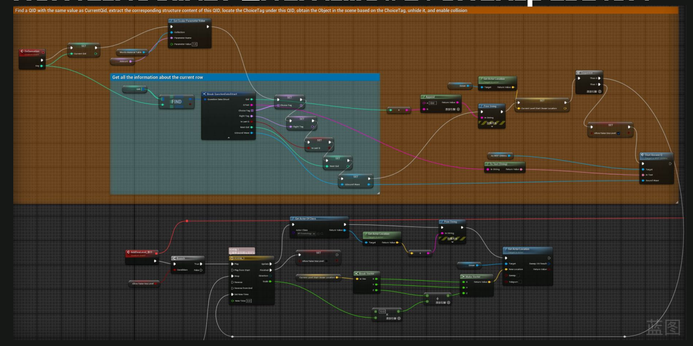
Function Components:
Detect collisions and distinguish valid collision targets
Handle damage and invincibility (GodMode) logic
Reload the current level when HP reaches zero

Tunnel(BP_ChangeTunnelDroneSpeed)



When the player-controlled drone overlaps the collision box, change the drone's **movement speed.**

MentalRoom(BP_RuntimeWaveManipulator)



Enable smooth blending (Blend/Lerp) between different **wave presets**.
When **ChangeWave(InputWaveMode)** is called, it doesn't switch the wave shape immediately; instead, it uses a **Timeline** to smoothly interpolate between two sets of **wave parameters**, creating a dynamic, gradual transition of the sea surface.