MINUTES

Production Date: 2025.11

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Solo Project

Narrative Design & Programming

Made With

Set inside a train carriage, this narrative mystery is designed around an eight-minute countdown and a time-loop structure. Players uncover conflicting accounts through passenger dialogue, observation, and investigation. Progress depends on what they learn: familiar characters, objects, and actions take on new meaning as their understanding develops. The ultimate goal is to reconstruct the chain of events, understand what triggers the bomb, and prevent the explosion. The current prototype focuses on timed dialogue progression, using elapsed time and previously completed conversations to control when new information becomes available.

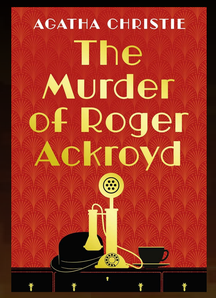
Video Link: https://youtu.be/JeFhBCjSYQw

How can players uncover the truth when everyone has something to hide?

Inspiration

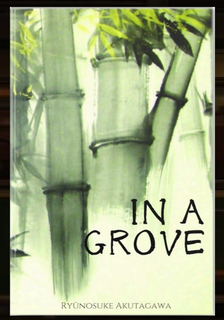
MINUTES draws inspiration from Agatha Christie's The Murder of Roger Ackroyd and Ryūnosuke Akutagawa's In a Grove. Both prompted me to explore how people shape an account through what they reveal, omit, or justify. I developed this interest into a mystery inside a train carriage, where three passengers offer incomplete accounts of the same incident.

References



The Murder of Roger Ackroyd — Selective Narration

I took inspiration from how an apparently credible account can conceal crucial actions. In MINUTES, characters mix truthful details with omissions, encouraging players to examine what remains unexplained rather than simply identify false statements.



In a Grove — Conflicting Testimonies

The story's conflicting accounts inspired me to write testimony shaped by self-interest and self-justification. Players compare what each passenger witnessed with how they interpret or excuse their actions.

Character & Narrative Design



Passenger 1 — The Reluctant Owner

He admits owning the bag but conceals a theft. His evasiveness creates suspicion, challenging players to distinguish dishonesty and ownership from responsibility for placing the bomb.

Passenger 2 — The Self-Protective Witness

He hides the fact that he moved the suspicious bag away from himself. His account shows how fear can lead someone to shift the danger to others and conceal information needed to reconstruct the event.



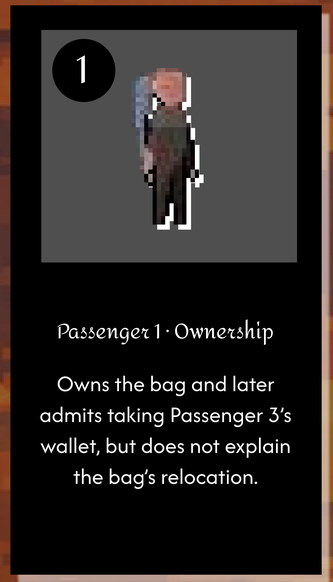
Passenger 3 — The Persuasive Explainer

He appears cooperative, yet changes his explanation for touching the bag. His plausible reasoning directs attention toward others, requiring players to compare his account with the sequence of events.

From Narrative to Play

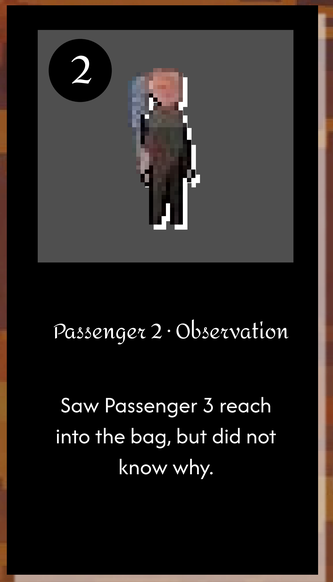
The eight-minute loop lets players revisit these accounts using what they learned in previous loops. Familiar statements gain new meaning as players distinguish who owns the bag, who moved it, and who placed the bomb.

Dialogue Design



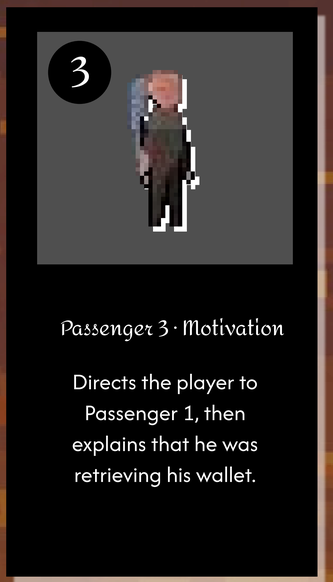
Passenger 1 · Ownership

Owns the bag and later admits taking Passenger 3's wallet, but does not explain the bag's relocation.



Passenger 2 · Observation

Saw Passenger 3 reach into the bag, but did not know why.



Passenger 3 · Motivation

Directs the player to Passenger 1, then explains that he was retrieving his wallet.

One bag, viewed through ownership, observation, and motivation.

Passenger 1 · Initial

"That bag by your feet is mine."

Passenger 1 · Later

"All right. I'll tell you. I took his wallet and put it in my bag."

Passenger 2 · Observation

"I saw the third passenger reach into that bag."

Passenger 3 · Explanation

"I did touch the bag. I only took my wallet back. I didn't touch anything else."

Design Rationale

Establishing who owns the bag does not establish who owns everything inside it. The later admission changes that initial understanding.

Design Rationale

I presented the observed action before revealing the motive. This encourages players to question whether reaching into the bag necessarily implies theft, and to reconsider the action in light of another perspective.

Passenger 3 · A Lead

Shifts the player's attention from who owns the bag to what is inside it.

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Passenger 1 · An Admission

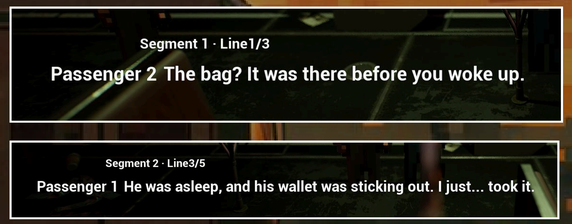
Admits taking Passenger 3's wallet and putting it in his own bag.

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Passenger 3 · An Explanation

Explains that he reached into the bag to retrieve his own wallet, giving players a new interpretation of the action.

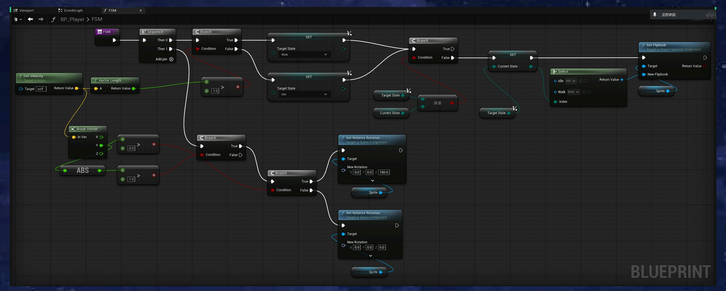
Later dialogue segments unlock after one minute of elapsed time; some also require an earlier conversation to be completed.



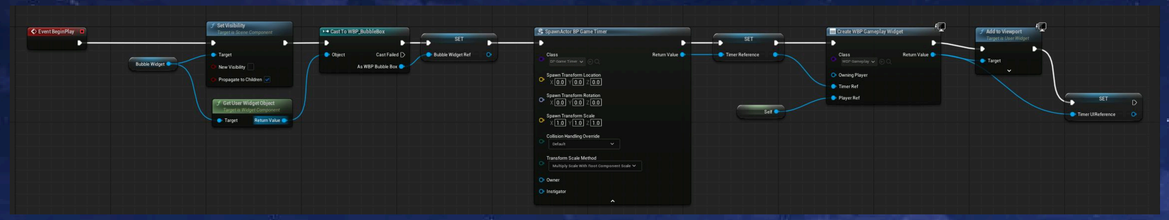
- E-key progression: Read one line at a time without a question-selection menu.
- Speaker identification: Keep each statement associated with its source.
- Reading progress: Show the current segment and line position.

HD-2D Style

Character Movement and Animation

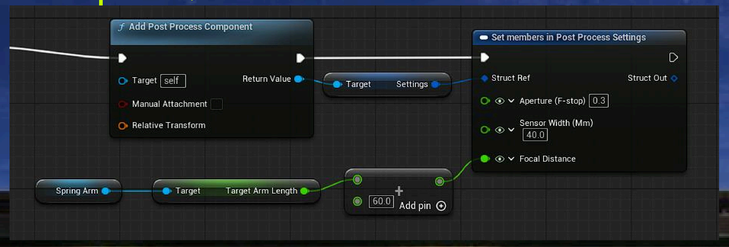


Implemented a direction-based character movement system using a small state machine. The character automatically changes facing direction and animation state based on movement input.



Player and Actor Initialization

Depth of Field



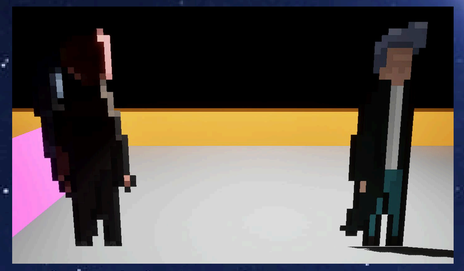


"Aperture" controls depth of field: a lower f-number produces a shallower depth of field and stronger background blur.

"Sensor Width" sets the horizontal size of the camera's virtual sensor. Together with focal length, it determines the field of view and framing. I adjusted it to refine the composition.

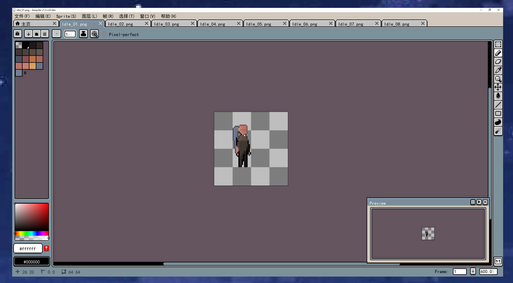
"Focal Distance" determines the distance from the camera at which objects are in focus. The camera arm length can serve as a starting point, with further adjustments as needed.

Edge Normals and Lighting

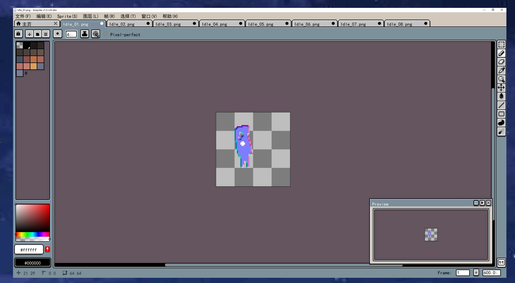


Before and After Normal Mapping

Without adjusted normals, 2D pixel characters may appear overly dark when lit from behind. I generated and applied custom normal maps to improve edge visibility and create a clearer lighting response on the sprites.



Original Image



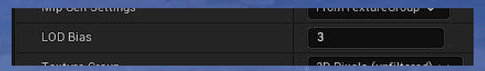
Generated Normal Map

Pixelated Environment Materials

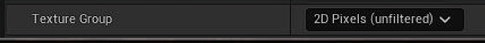


Before

Step 1: Select the object's material, open the texture it uses, and increase LOD Bias. I set it to 3.



Step 2: Set Texture Group to 2D Pixels (unfiltered).

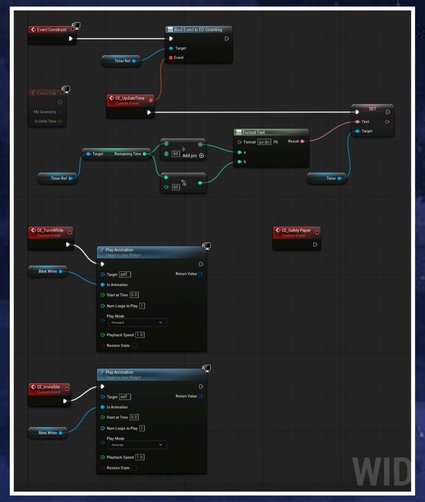




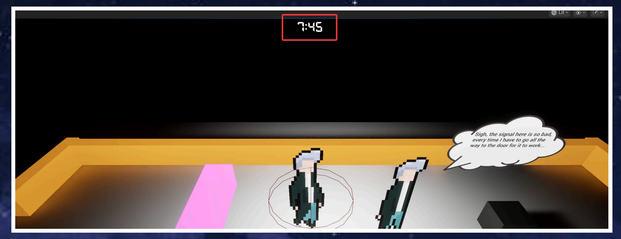
After

Event Trigger Logic

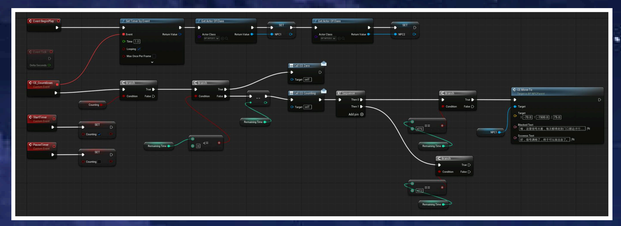
Time Trigger



Countdown Blueprint Implementation

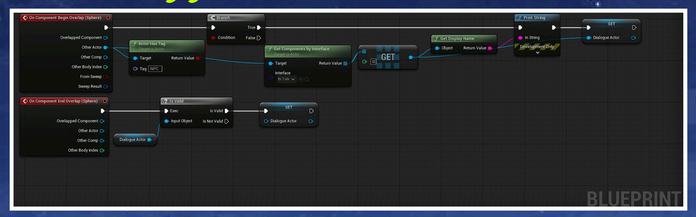


Countdown Example



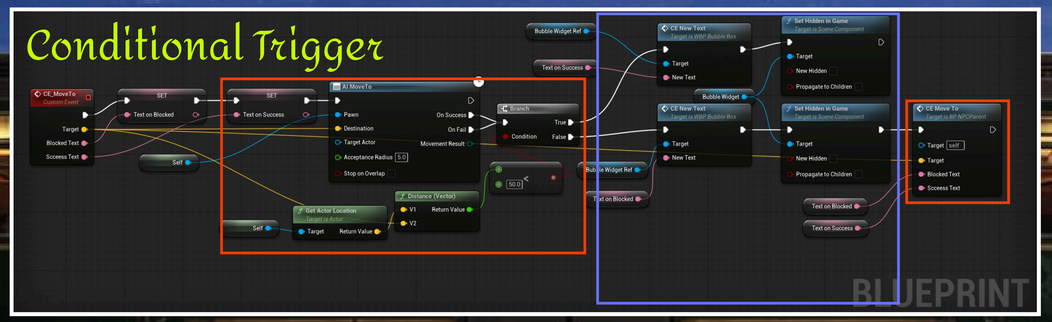
Countdown Function and Associated Event Triggers

Area Trigger



Use a sphere collider to detect whether the player and NPCs are nearby.

Conditional Trigger



The blue box contains the dialogue logic, while the orange box checks whether the NPC has reached its destination.

Dialogue System

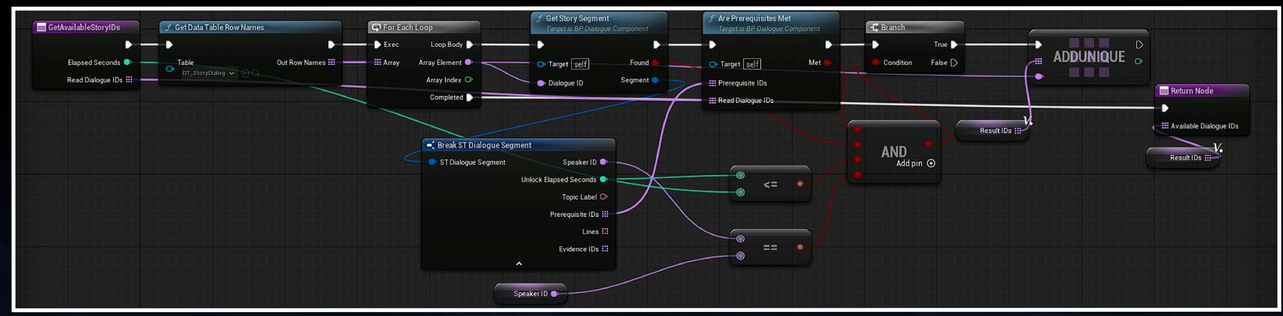
Overview

I wanted each passenger's dialogue to reveal information gradually, rather than repeat the same lines throughout the game. The challenge was managing when each segment became available without making the existing Blueprint graph harder to follow.

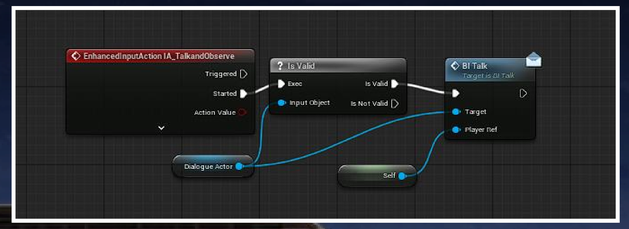
I moved dialogue content into a Data Table and organized the logic into reusable functions, checking the speaker, elapsed time, and previously completed segments. By reusing the existing dialogue widget and E-key interaction, I could expand the story without changing how players interacted with it.



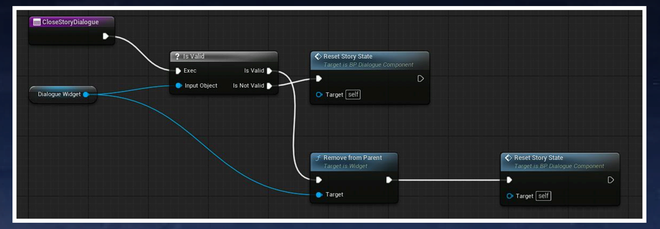
Dialogue segments store speaker, timing, prerequisites, and lines.



Select dialogue segments by NPC, elapsed time, and prerequisites.



Input triggers dialogue through an interface.



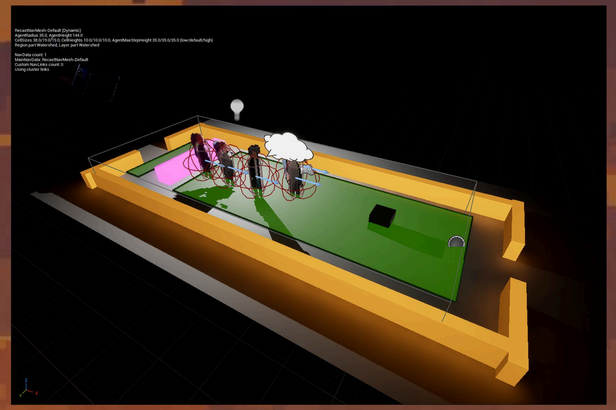
Remove the dialogue widget and reset its state.



Press E to start, advance, and close the dialogue.

Scene Overview

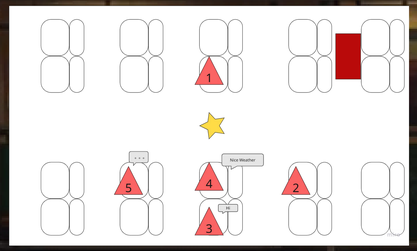
This test scene simulates a train carriage and is used to test various gameplay features. A dialogue bubble is still visible above the player's head—a feature I implemented earlier but later removed as the design evolved.





This screenshot shows the latest version of the prototype. The three NPCs stand apart, allowing players to distinguish between them by their positions and dialogue boxes.

This is one of the top-down layout sketches from the early stages of development. The original concept was a puzzle game set in a compact, self-contained environment. However, my limited familiarity with Unreal Engine's Blueprints led me to shift toward a text-driven narrative game, which also gave me an opportunity to challenge my storytelling skills.



Project Management and Timeline

This was my first time using a schedule like this for a solo project. Acting as my own project manager, I found it easy to put things off, so I often finished tasks later than planned. (●'◡'●)

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	Task	Description	Task Type	Estimated Start Date	Estimated Review Date	Actual Start Date	Actual Review Date	Priority	Development Status
2	Character movement	WASD four-direction movement	Gameplay Interaction	2025-11-20	2025-11-21	2025-11-20	2025-11-22	High	Completed
3	Countdown	8 minutes	Gameplay Interaction	2025-11-20	2025-11-22	2025-11-20	2025-11-22	High	Completed
4	Level 1 Bad Ending - explosion UI animation	Fade to white	UI Feature	2025-11-20	2025-11-22	2025-11-22	2025-11-22	High	Completed
5	Broadcast audio	Play once after the opening	Gameplay Interaction	2025-11-20	2025-11-24	2025-11-29	2025-11-29	High	Completed
6	Interactive item - Safety Notice Card	Place it behind one of the seats in the carriage, close enough for the player to pick up and inspect.	Gameplay Interaction	2025-11-29	2025-12-06	2025-11-29	2025-12-06	High	Completed
7	NPC blueprint	1. Interaction with the player 2. Dialogue 3. Wandering / waiting AI behavior	Gameplay Interaction	2025-12-13	2025/12/20	2025-12-13	2025-12-20	High	Completed
8	NPC editable behavior		Gameplay Interaction	2025-12-19	2025/12/20	2025-12-19	2025-12-20	High	Completed
9	Character button interaction		Gameplay Interaction	2025-12-17	2025-12-18	2025-12-17	2025-12-18	High	Completed
10	Character button triggers dialogue	Detect the player entering within 1 meter to trigger dialogue (E).	Gameplay Interaction	2025-12-13	2025-12-16	2025-12-17	2025-12-20	High	Completed
11	Menu UI	Start game; quit game	UI Feature	2025-12-20	2025-12-27	2025-12-20	2025-12-27	High	Completed
12	Inspect item UI		UI Feature	2025-12-24	2025-12-27	2025-12-24	2025-12-27	High	Completed
13	Gameplay HUD	Top countdown timer; after pausing, show "Quit Game".	UI Feature	2025-12-20	2025-12-27	2025-12-20	2025-12-27	High	Completed
14	Collected clues UI		UI Feature	2025-12-20	2025-12-27	2025-12-20	2025-12-27	High	Completed
15	Carriage scene (HD-2D)	3D? Top-down?	Art Asset Preparation	2025-12-19	2025-12-24	2025-12-19	2025-12-24	High	Completed
16	NPC characters		Art Asset Preparation	2025-12-13	2025-12-13	2025-12-13	2025-12-13	High	Completed
17	Interactive items		Art Asset Preparation	2025-12-13	2025-12-13	2025-12-13	2025-12-16	High	Completed
18	Demo delivery - playtest		Gameplay Interaction	2025-12-27	2025-12-27	2025-12-27	2025-12-30		Completed
19	Revise based on playtest iteration			2025-12-27	2025-12-31	2025-12-30	2026-01-03		Completed
20	Layout starts			2025-12-31	2026-01-03	2026-01-03	2026-01-06		Completed
21	Record video			2025-12-31	2026-01-07	2026-01-07	2026-01-10		Completed
22	Optimization			2026-01-10	2026-01-14	2026-01-10	2026-01-14		Completed

Game Dev Plan

Issues and Future Plans

The game still has several areas for improvement. The dialogue-driven gameplay lacks depth, and there is currently no clue board or similar system to help players record and organize information, leaving gaps in the player experience.

The biggest challenge was adapting to Unreal Engine's Blueprint visual scripting system, as I personally prefer Unity's code-based workflow. Nevertheless, this project gave me experience with Unreal Engine features such as events and Data Tables. Moving forward, I aim to strengthen my programming skills in Unreal Engine.