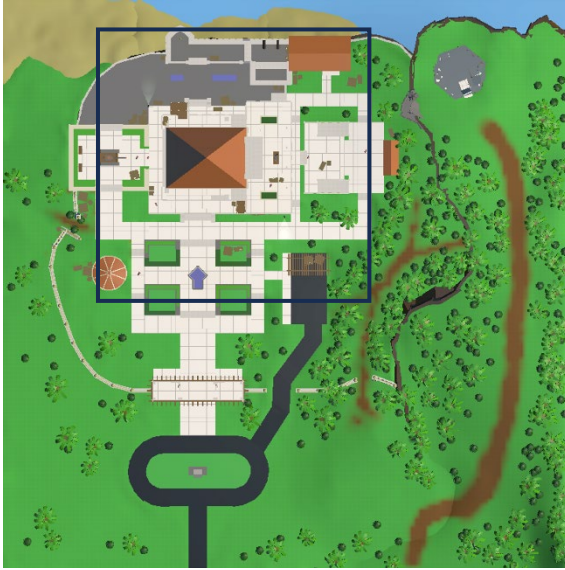


El Arte Degenerado - Change list

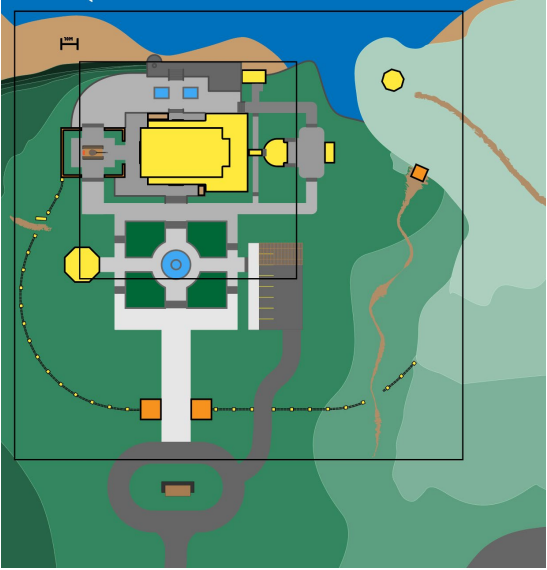
Structural and Gameplay Layout Changes

Geometrical changes

This section details significant alterations to the level's structure and gameplay layout, including the rationale behind each change, ensuring alignment with the project's spatial limits and gameplay objectives.

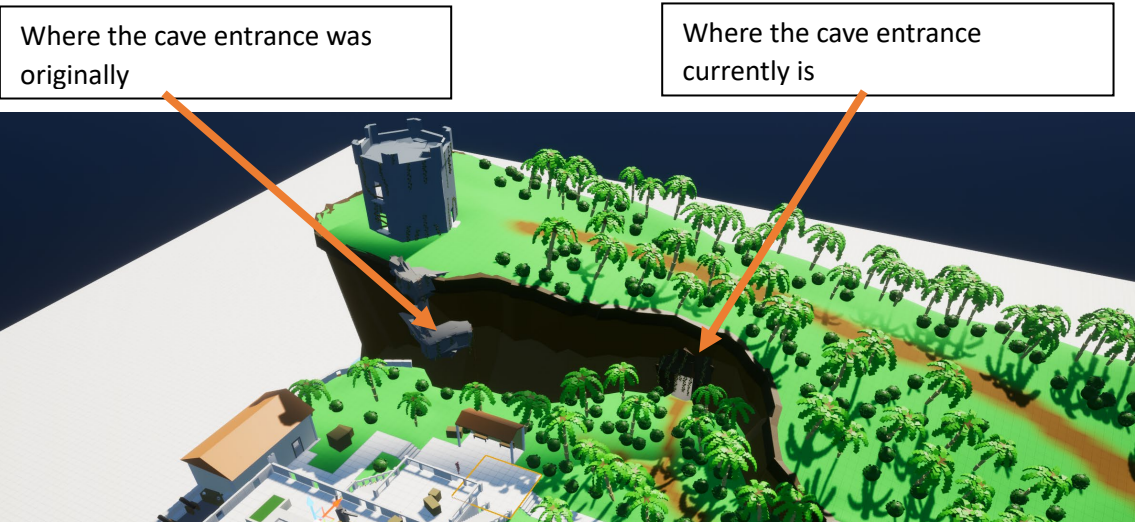


The revised 124x124 level layout, with the 64x64 gameplay area delineated



The original level proposal, showing the 124x124 and 64x64 borders inside it

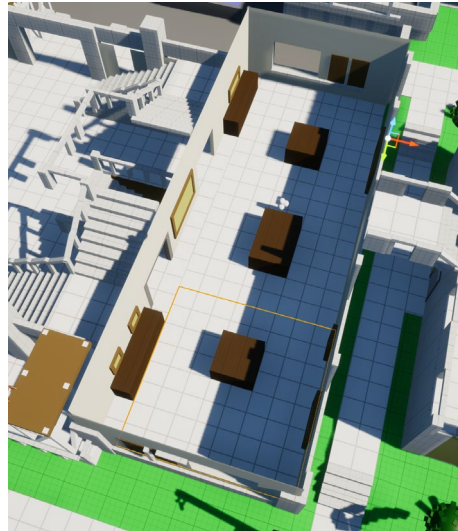
Front Garden and Palace Proportions: The length of the Front Garden and the width of the Palace have been condensed. This was essential to align the Yellow and Red Approach Zones, as defined in the Master Design Document (MDD), within the gameplay ingredient constraints. The alteration preserves the strategic intent of these zones.



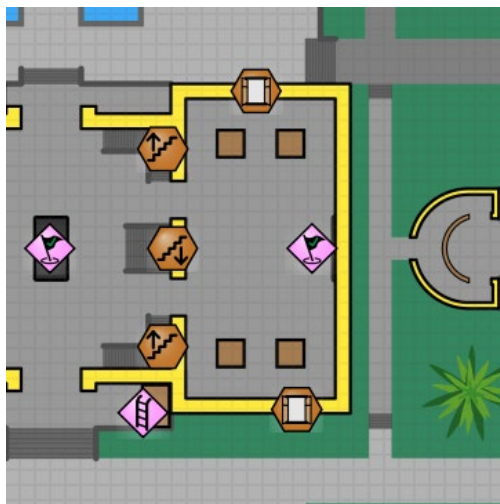
Mountain and Cave Entrance Reconfiguration: The mountain area's relocation closer to the Palace resulted in the cave entrance moving nearer to the fence. This shift improved the navigational flow towards the cave entrance and enhanced the distinctiveness of this path in relation to the mountain ladders. The cave entrance's proximity to the Palace front now also makes this traversal quicker, injecting dynamic gameplay options.



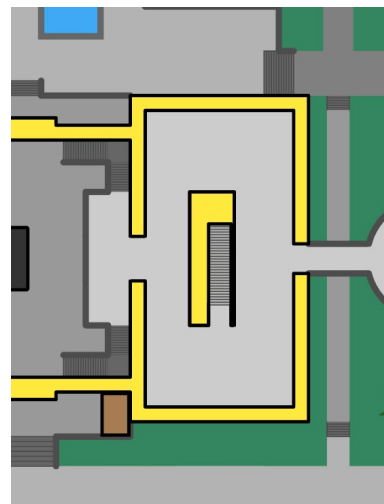
Current second floor inner room



Current first floor inner room



Original palace first floor design



Original palace second floor design

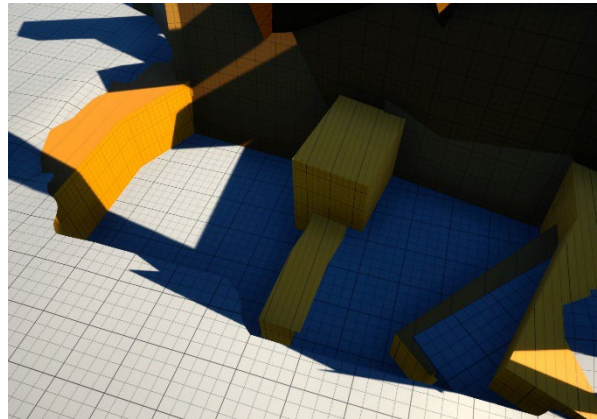
First and Second Floor Inner Rooms: The innermost sections of both floors experienced the most notable geometrical changes.

- The shrinkage of the Palace led to a decision to resize these areas instead of the main lobby. Preserving the lobby's grandeur was paramount for player immersion. The internal rooms' width was halved to accommodate this.
- The first floor's modification was relatively minor, involving the removal of a row of covers.
- The second floor saw more extensive changes, including the elimination of a corridor and the relocation of the central staircase to a wall adjacent to the main lobby. This rearrangement offers a new tactical dynamic, particularly in how players can now utilize

the scaffolding at the front of the Palace and access the stairs to the third floor with reduced detection risk.

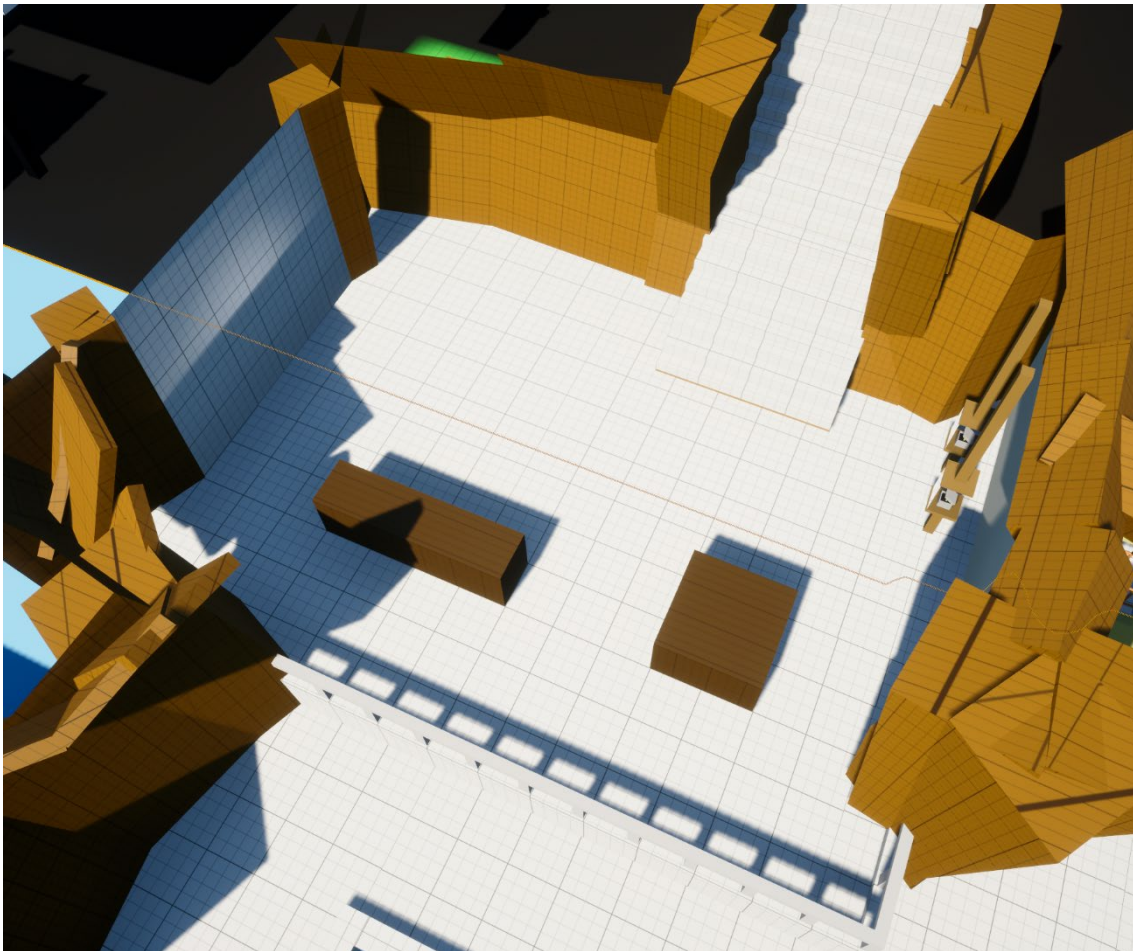


Current geometry of the cave



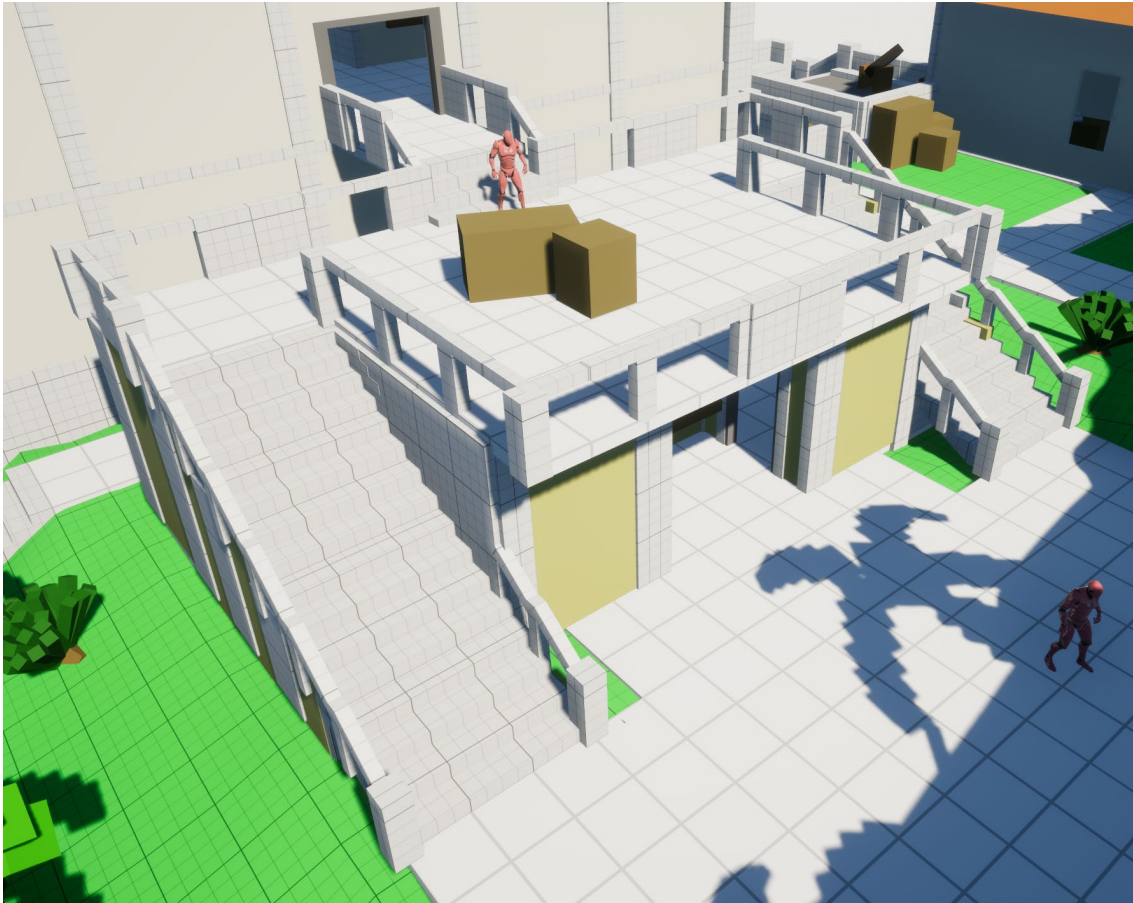
New cave's area with platform gameplay

Updated Cave Design: Initially shortened due to map size constraints, further reduction was necessary after playtest feedback indicated a lack of engagement and lengthiness in this section. To enhance player experience, the cave's length was minimized within structural limitations, and an engaging platform gameplay segment was added.



Current Underground floor inner room

Enlarged Inner Area: Contrary to the other modifications, the Underground Floor's interior space was expanded. This adjustment strategically situates the area's objective, offers more coverage options, and introduces novel entry points adjacent to the guardrail.



Current Visitor's Leisure Area

ModularKit Considerations: The Visitor's Leisure Area had its geometric shape updated to better fit the ModularKit available in the prototype.

[Ingredients and Gameplay Elements Changes](#)

Due to the 64m² limitation for game play Ingredients, all ingredients from the entrance towers and the mountain tower were removed. Instead of trying to squeeze these level environments to fit into the 64x64m area, it was preferred to just remove the Ingredients from them, to prevent the palace from becoming cramped and losing its grandeur. Likewise, the initial design objective of these environmental elements was to use them as reference points for navigation, but mainly as observation locations. And even with the removal of ingredients from these places, they maintain these same functionalities.



Entrance towers in front and Mountain Tower in the background

Changes to collectible ingredients

Ammo:

These ammunition additions aim to make traversing the level more interesting and rewarding. Each ammo pack has been configured to only have 2 ammos, preventing the game from being too easy.

- The ammunition from the Walled Garden was moved to the garden area closest to the Palace, to stay within the 64m2 limitation.
- Ammunition has been added to the open service area of the Subterranean Floor.
- Ammunition has been added to the inner area of the Second Floor.
- Extra ammunition has been added inside the Visitor's Leisure Area.
- 5 extra ammunition were added inside the Office Room to ensure engagement with this environment.

Treasures:

The objective of these changes is to maintain immersive gameplay at different points in the level and reward exploration by players.

- The Kiosk had an extra treasure added.
- The scaffolding at the back of the palace had an extra treasure added, with one on the first floor and another on the second.
- The Palace Viewpoint had a treasure added at the end near the Service House.
- The inner area of the First and Second floors of the Palace each had a treasure added.
- The Visitor's Leisure Area's indoor area has had two treasures added.
- Extra treasure has been added to the Office Room
- Two treasures have been added to the Underground Floor service area.
- A treasure was the cave near the cave exit on the Underground Floor.

Documents:

Several documents were added to the map or modified to serve as clues for locating items/objects or as hints for paths and interactions. Ensuring that the player knows how to find objectives and find specific paths, elements and interactions on the map in an organic way.

- The Underground Floor service area document has been modified to serve as a clue as to where/how the player can find the Office Room key.
- A document has been added to the pergola area in the parking lot to give the player hints about the secret entrance to the cave.
- A document was added to the beginning of the Front Garden that tells a little about the history of the Palace and gives tips on where the mission objectives are located.
- A document has been added to the terrace near the scaffolding behind the palace, which tells the player that the tank is working and can be used.
- When the Azulador is enabled, a document in the Gazebo hints that it is in the Visitor's Leisure Area.

Boxes:

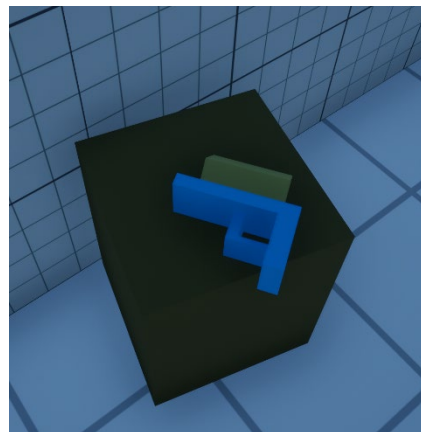
Several boxes/covers were added at different points of the level according to the perceived need for places for players to hide and also to create alternative traversal routes through the level, guaranteeing dynamic and personal movement for each player.

Objectives:

- The statue that was located at the Palace Viewpoint was moved to the terrace, making the terrace area more relevant to gameplay and leaving the Palace Viewpoint area with the only usability of obtaining the key from the Official who patrols it. Making the game's objectives less crowded and giving more purpose to the terrace area, which ended up looking empty in the prototype.

Custom Ingredients:

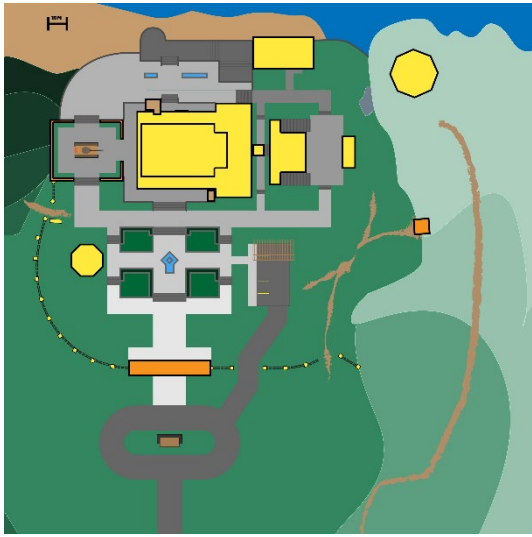
- It is possible to enable the Azulador in the game's Main Menu, if so, it will be located inside the Visitor's Leisure Area's and the player can pick it up to use it. The Azulador shoots blue paint infinitely and players can use it to paint mission objectives and the environment around them. The idea behind this customized ingredient is to make the experience of vandalizing Castillo's government works more immersive and meaningful than would be possible by pressing just a simple button.



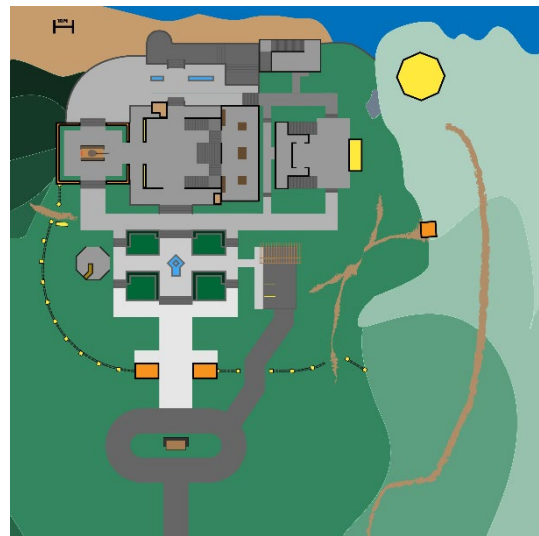
- The tank on display in the Walled Garden is fully functional (despite some bugs with its movement), and the player can use it to fight the guards, but mainly, to destroy the Castillo statue in the Main Lobby. The idea behind this customized ingredient is to bring a sense of power/pleasure to players as they destroy government works in a stupendous and fun way.



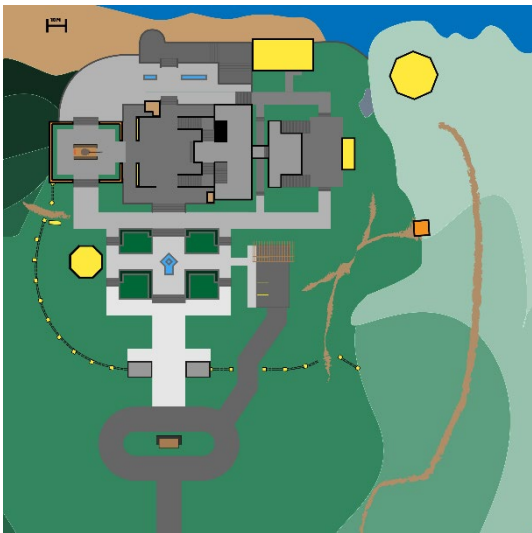
2D map updates



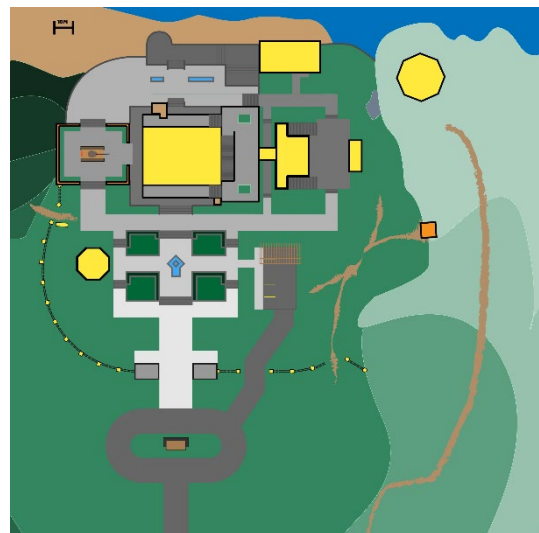
External Overview



2First Floor



Second Floor



1 Third Floor



Underground Floor

Changes, Additions, and Corrections to Blueprints

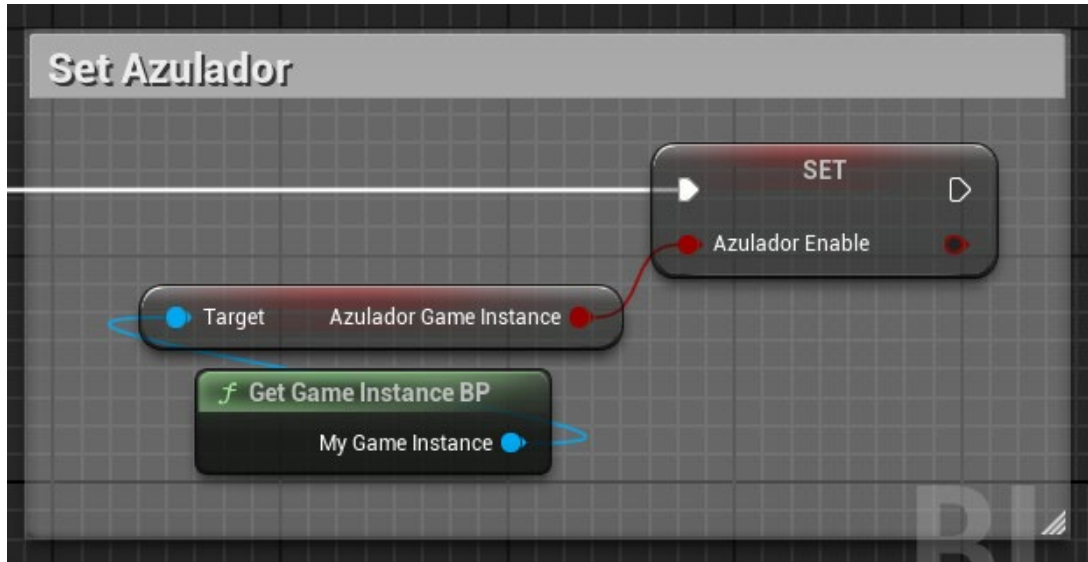
Original Blueprint Changes

BP_GameInstance

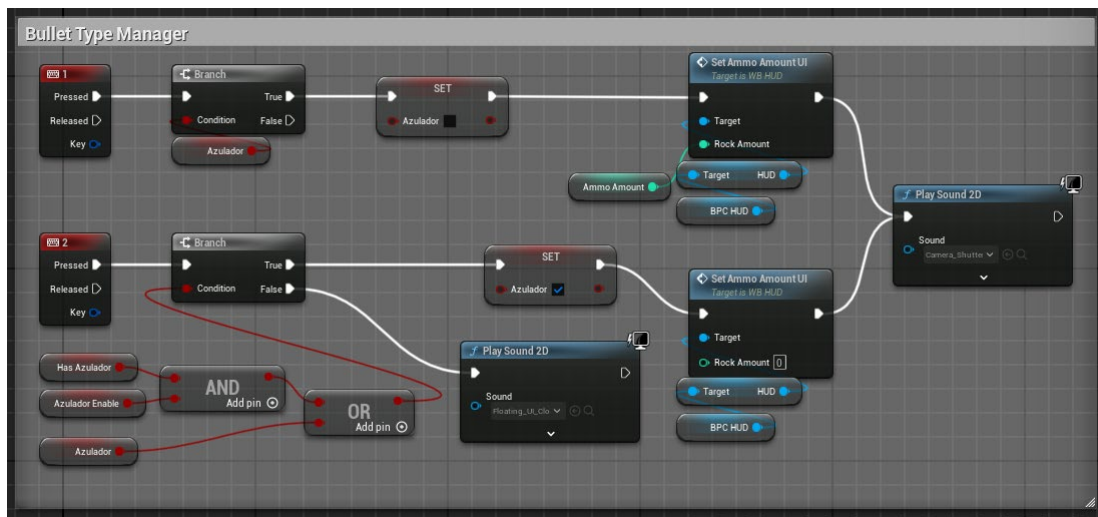
- **New Addition:** A Boolean variable AzuladorGameInstance to track the activation status of Azulador in subsequent gameplay.

BP_PlayerCharacter

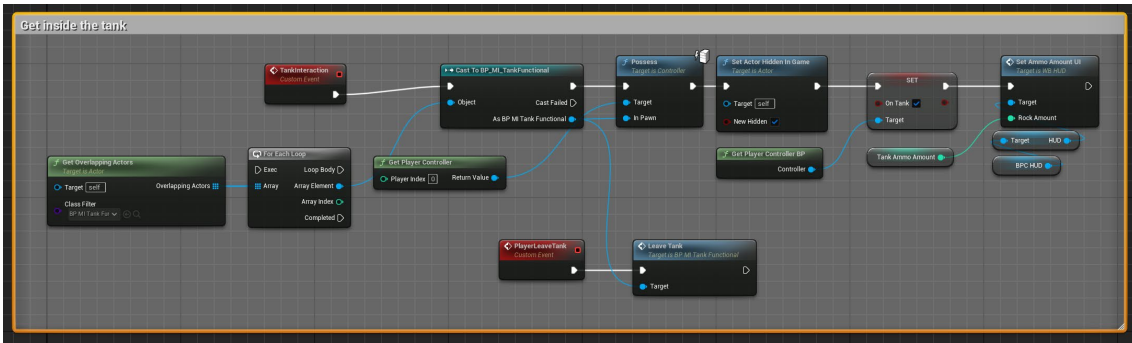
- **ConstructionScript Update:** Now evaluates whether the Azulador should be enabled during blueprint construction.



- **Bullet Type Management:** Adds a mechanism to switch between Azulador and standard bullets using keys 1 and 2, provided the Azulador is enabled and in the player's inventory.

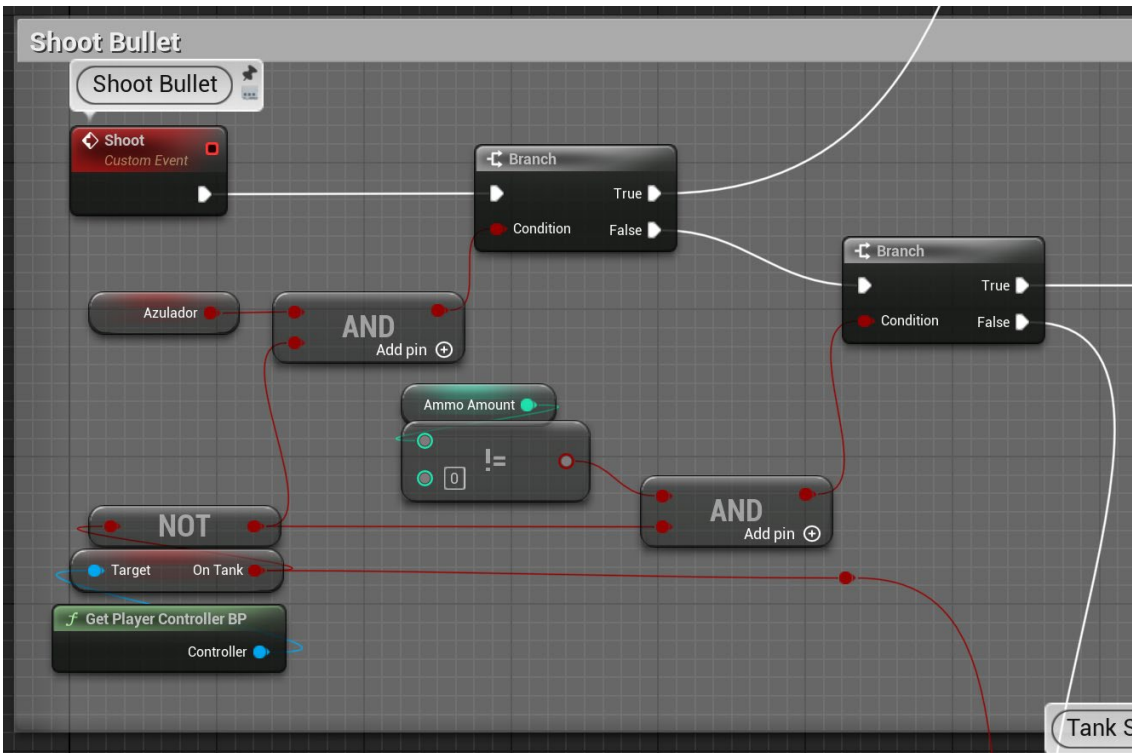


- **Character Pawn Manager:** Facilitates player transitions to the Tank pawn during interactions with the Tank turret, including setting human character visibility and bullet type according to the current pawn.

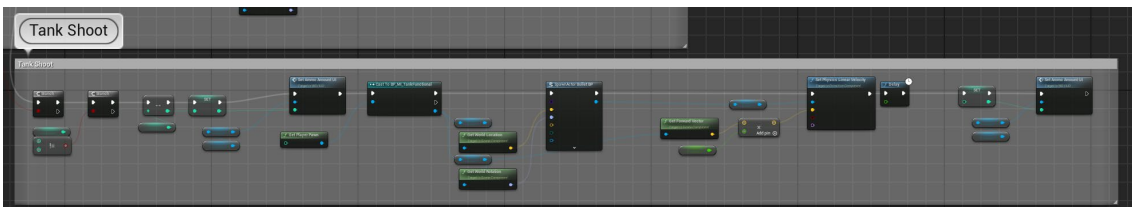


- **Shoot Bullet Logic Revision:**

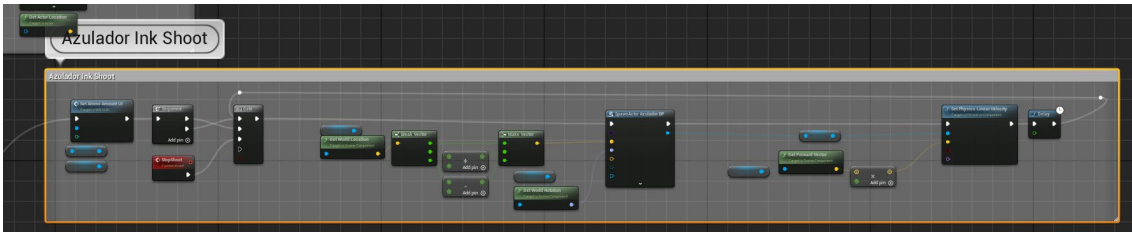
- Adjusts bullet spawn logic based on the player pawn's current state, distinguishing between standard, tank, and Azulador bullets.



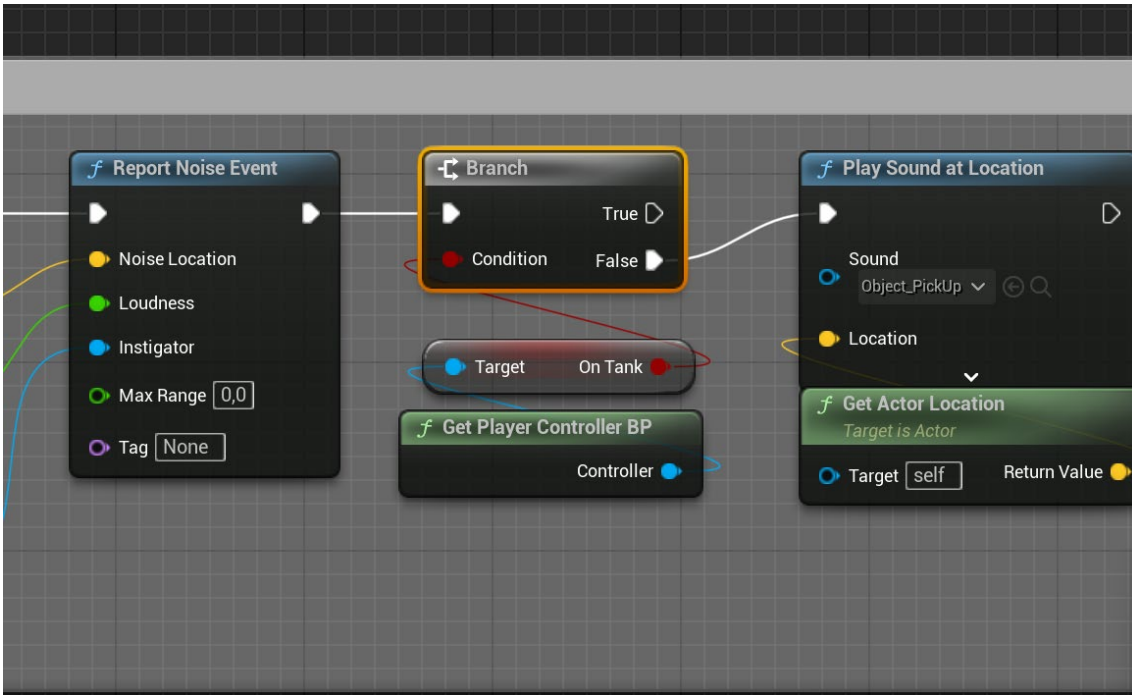
- For Tank use, it changes the bullet spawn location to the Tank barrel and sets ammo count to constant 1 with a 3-second reload.



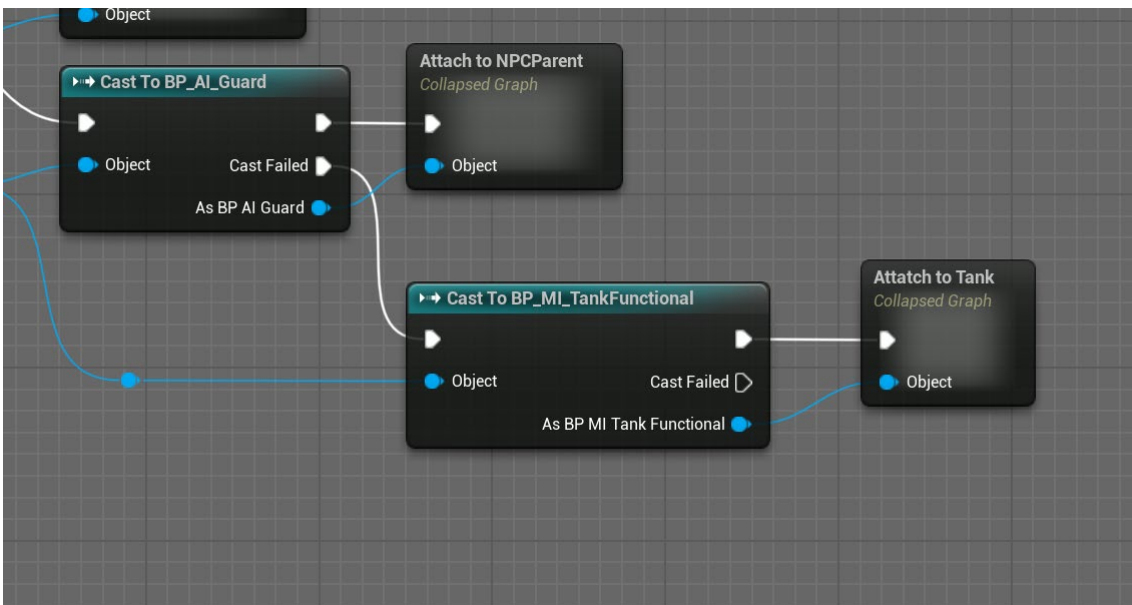
- When Azulador is equipped, it enables "automatic" firing mode, increasing bullet spawn rate, and changes event spawn actor to AzuladorBP.



- **Foot Noise Adjustment:** Disables footstep noise when the player controls the tank.



- **Interact Graph Update:** Attaches the Widget to the Tank during player interactions.



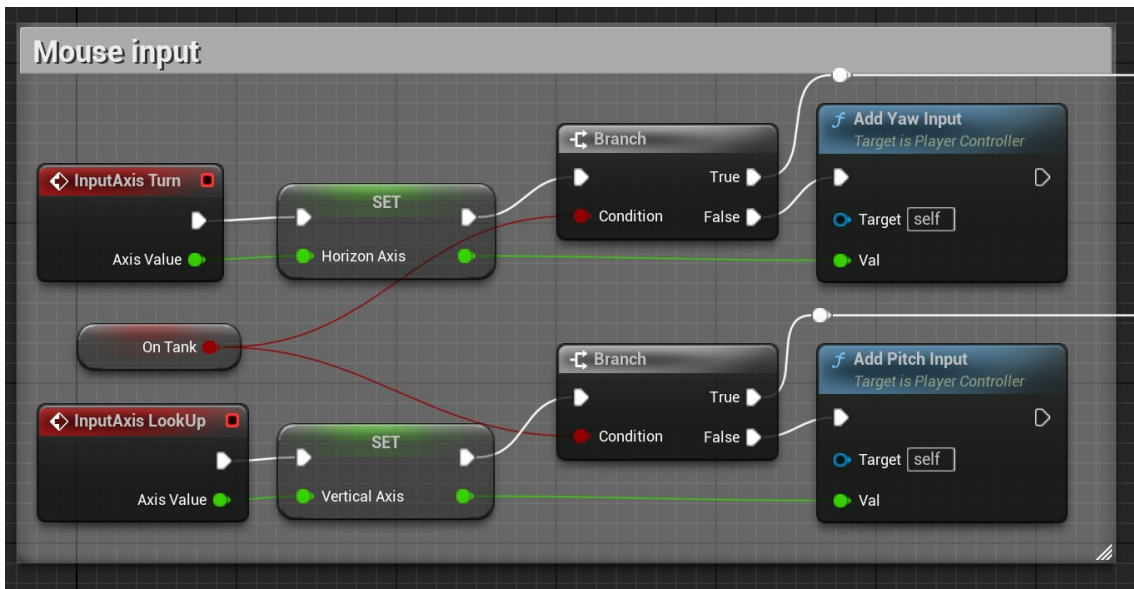
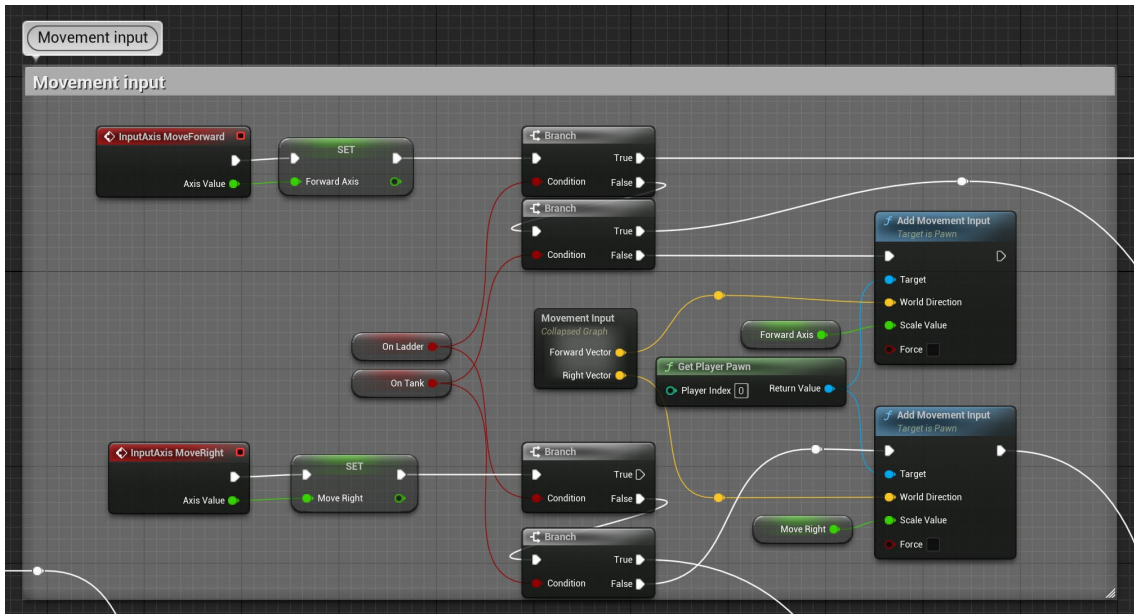
- **Initial Ammunition Reduction:** Based on initial playtest feedback, the starting ammunition count has been reduced to 4. This change addresses concerns that the mission was too easy, not due to enemy numbers but rather due to the ease of

eliminating and the abundance of ammunition. The reduction aims to heighten the gameplay challenge and align the difficulty level more appropriately.

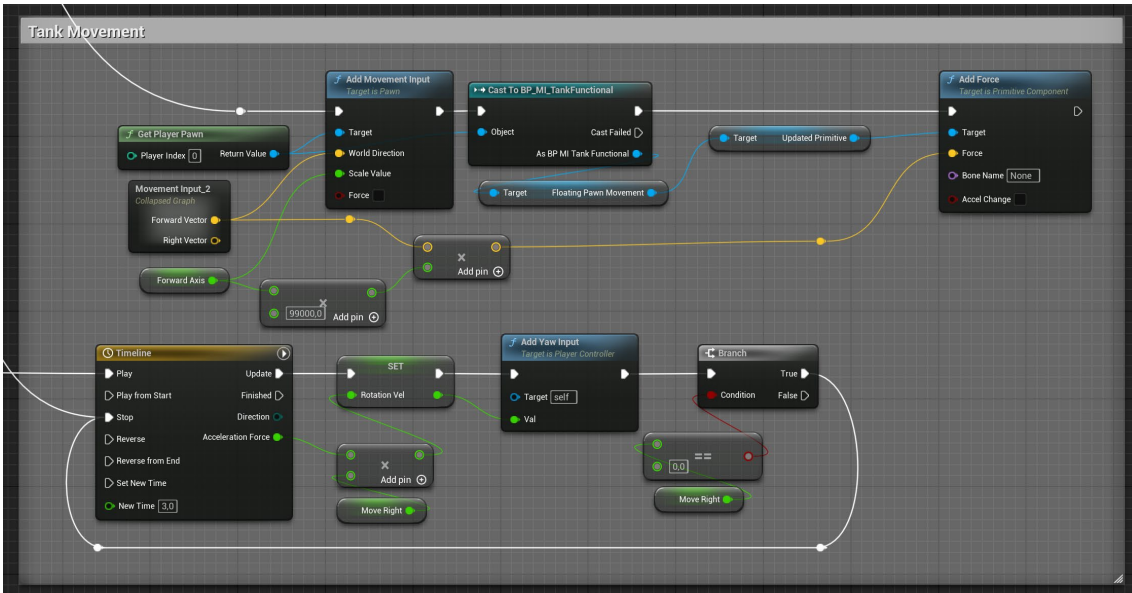
BP_PlayerController

- **Input Handling Adjustments:**

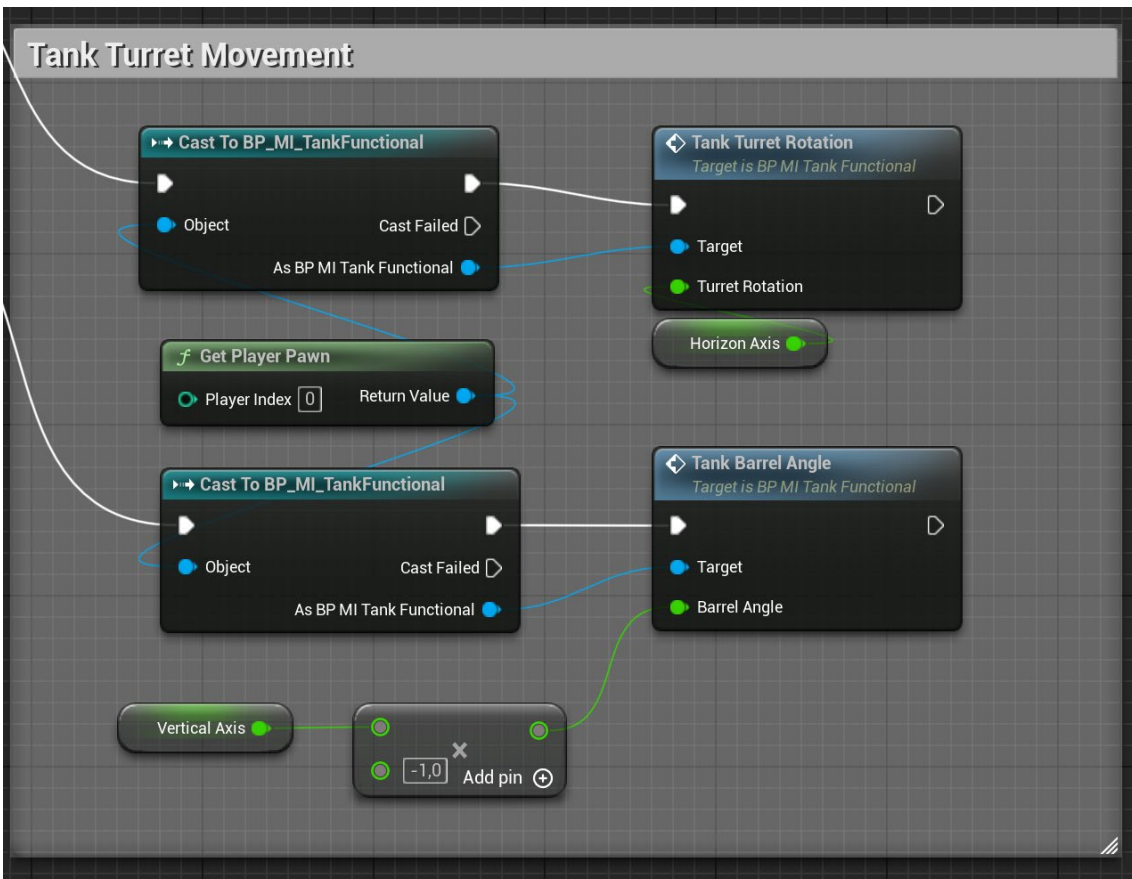
- The blueprint now includes conditional checks to determine if the player is inside the tank. Based on this condition, it alters the character's movement and rotation logic.



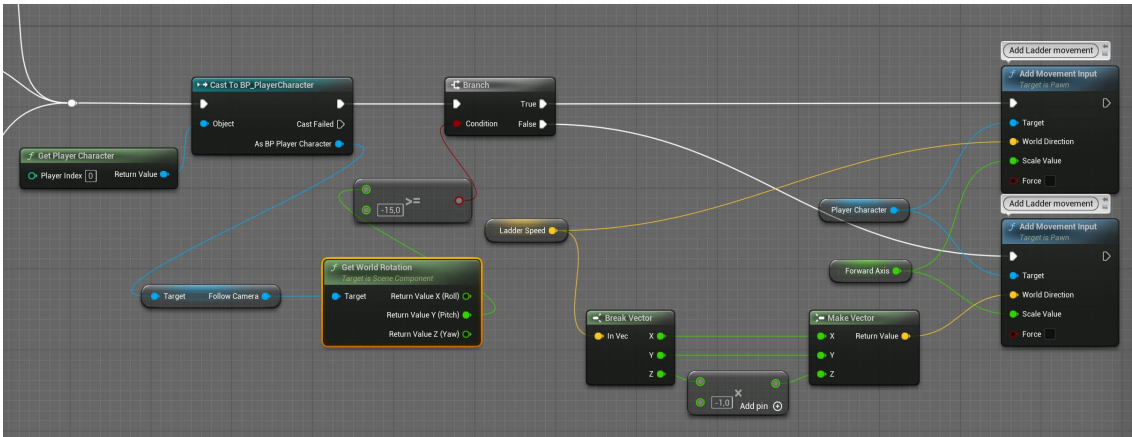
- If the player is found to be inside the Tank, the movement inputs are redirected to control the Tank pawn. This is required due to the different movement behaviors between the human character and the Tank.



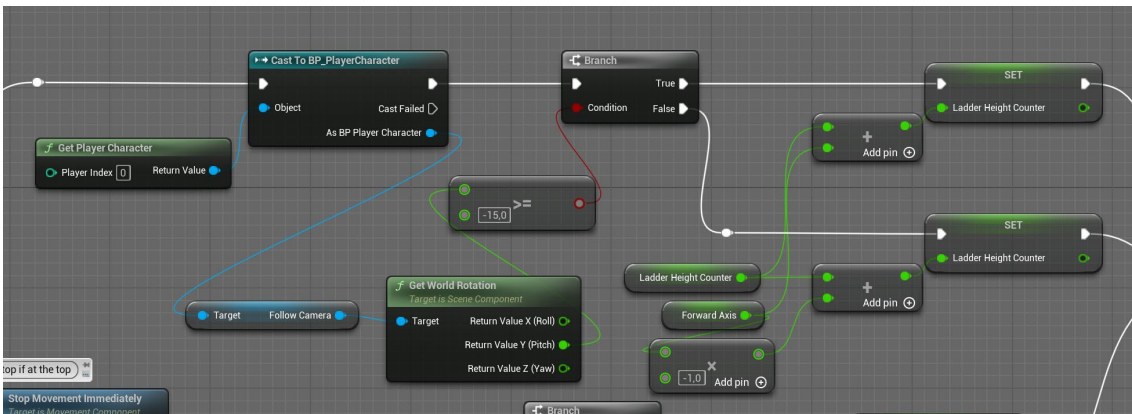
- Similarly, when inside the Tank, the mouse input logic is adjusted to control the rotation of the Tank turret and barrel. This adjustment includes implementing angle limitations to the turret and barrel movements, ensuring a realistic and constrained motion akin to an actual tank.



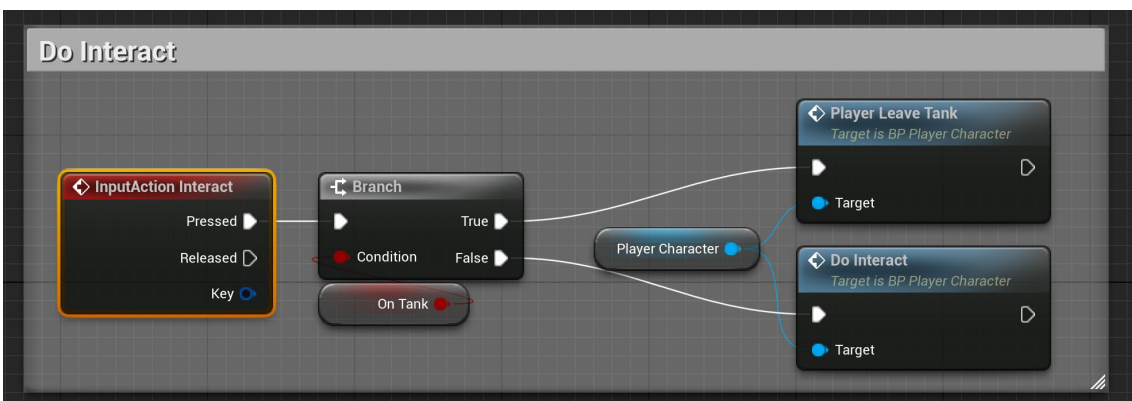
- **Ladder Movement Handling:** Enhanced to include the player's view angle as a factor in determining movement direction. This enhancement aims to make ladder movements more natural and intuitive, aligning the character's ascent or descent with the camera's angle.



- The Ladder Movement Handle now also involves setting the Ladder Height Counter variable differently. The calculation for this variable is adapted to be either a subtraction or addition, contingent on the camera's angle, avoiding any possible error in the movement due to the new positive/negative value logic.

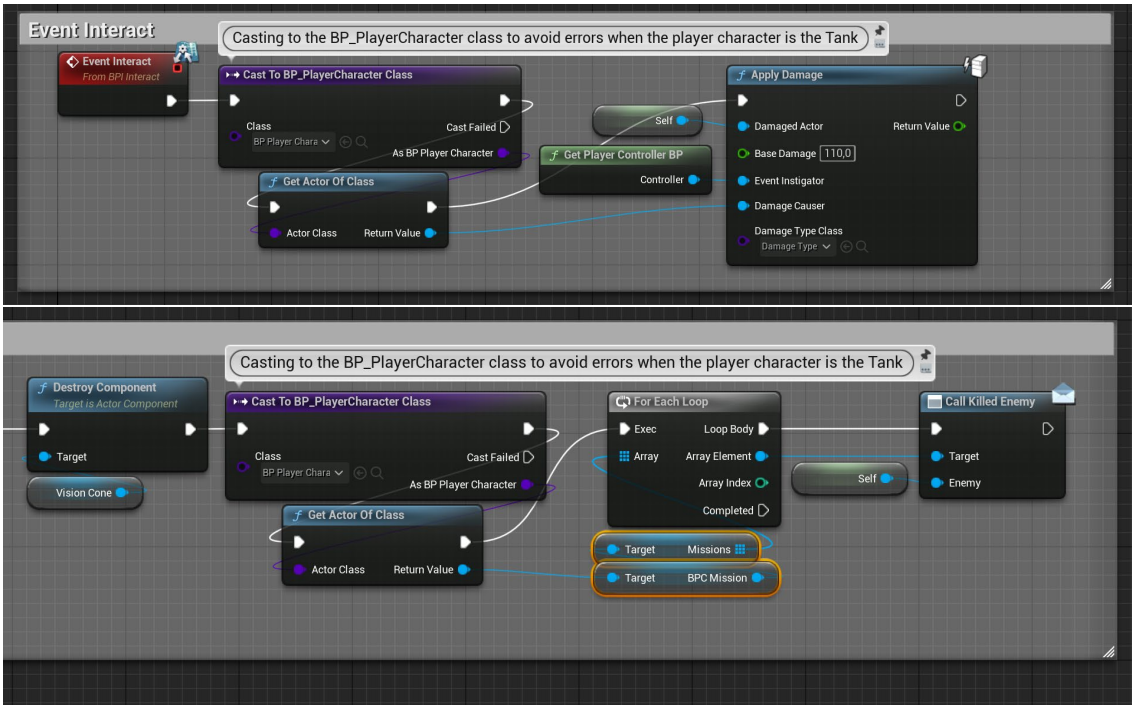


- **Event InputAction Interact Alteration:** The blueprint has been modified to call the function Player Leave Tank in the BP_MI_TankFunctional when the player is controlling the Tank. This change ensures that appropriate actions are taken when the player decides to exit the tank, seamlessly transitioning control back from the Tank to the player character.



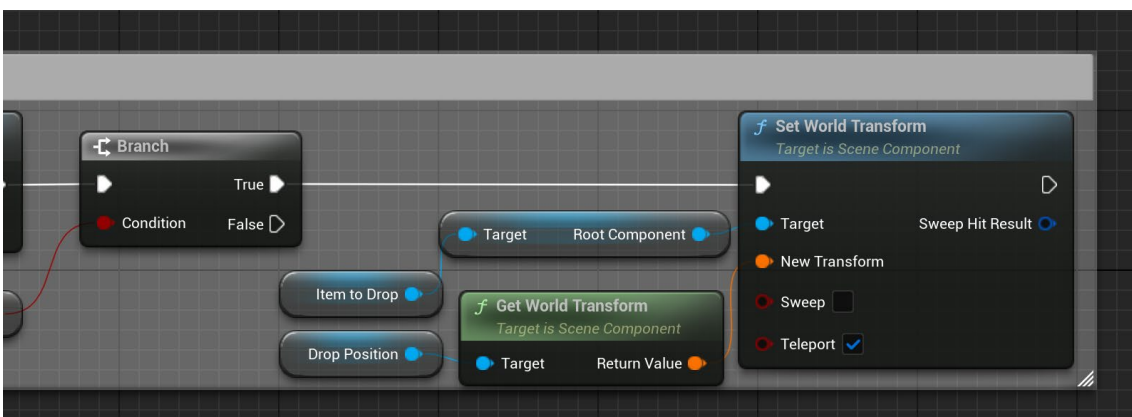
BP_AI_Guard

- **Interaction and Death Event Tweaks:** Minor changes to prevent casting errors to the player when the Tank is in use.



- **Item Drop Functionality:**

- The BP_AI_Guard now includes a new feature where enemies can drop specific items upon being defeated by the player. This functionality is governed by a new public Boolean variable HasItemToDrop.
- If HasItemToDrop is set to True, the enemy will spawn the object specified in the new public variable ItemToDrop upon death.
- The implementation involves moving a hidden actor to the forefront of the Enemy upon its defeat. This design choice was made to enable enemies to drop unique actors with predefined configurations set by the designer. Examples of such items include custom keys actors set that open specific doors or other unique objects.

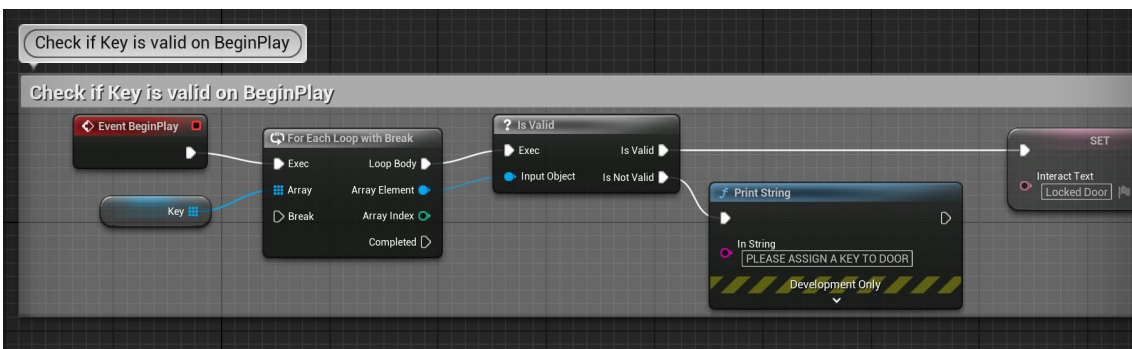


- **Material Variation:** Introduces a duplicate Guard material with altered tones to signify enemies with special drop items.



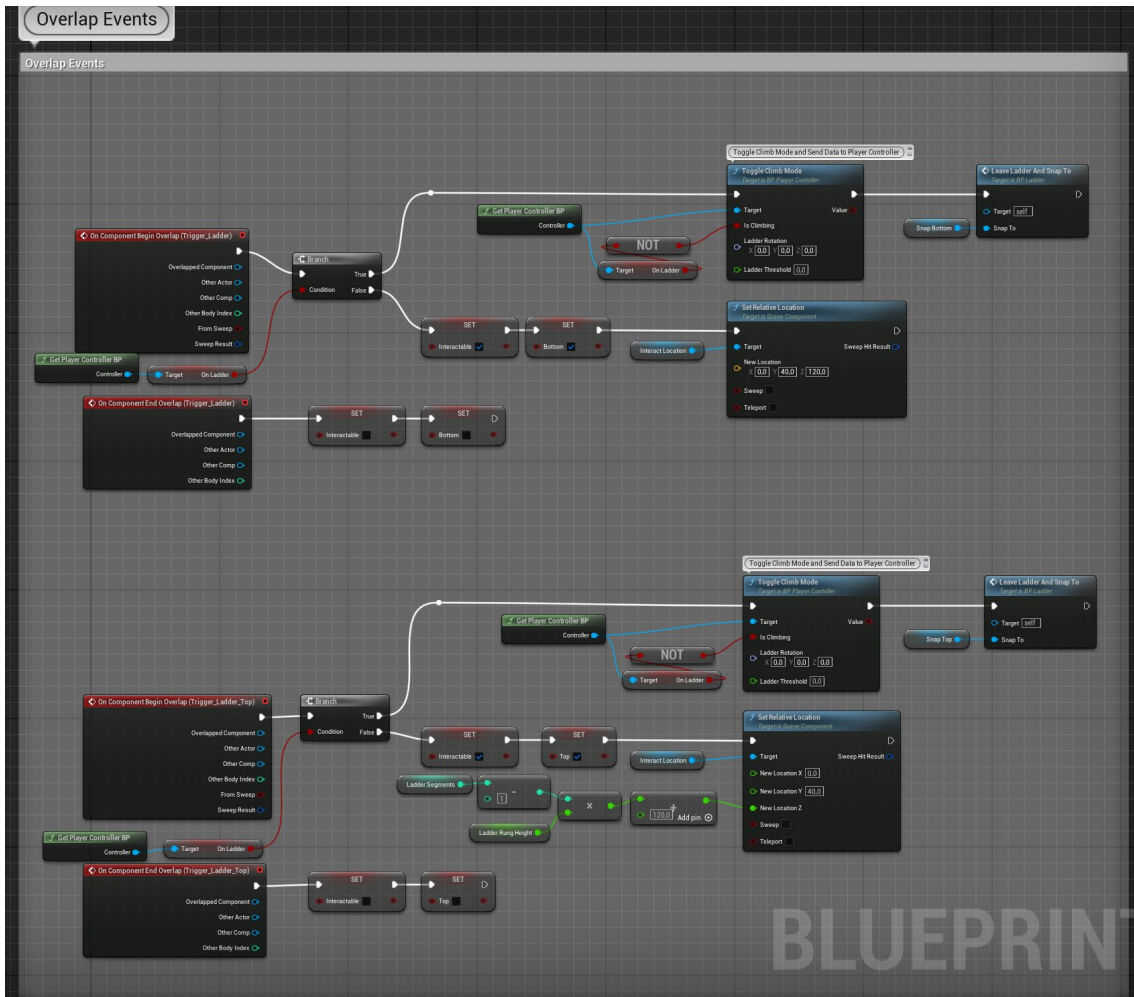
BP_Door_Locked

- Key Variable Update:** Changes the Key variable to an Array type and adjusts the Check if Key is valid on BeginPlay logic to support multiple unlocking keys.

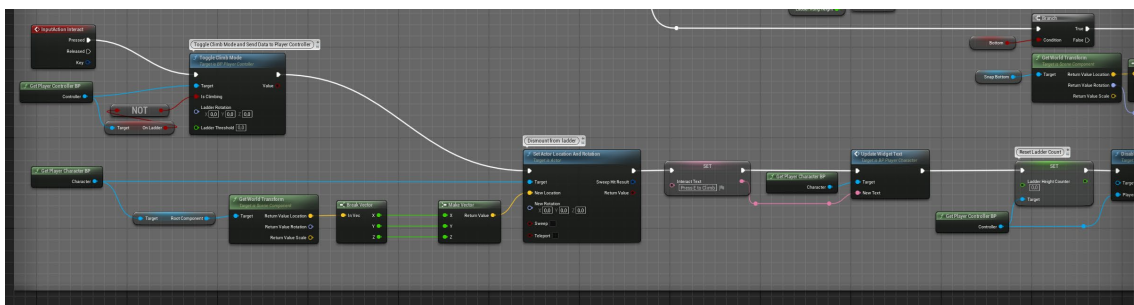


BP_Ladder

- Overlap Event Logic Revision:** Automatically moves the player off the ladder at its ends, removing the need to press E to exit.

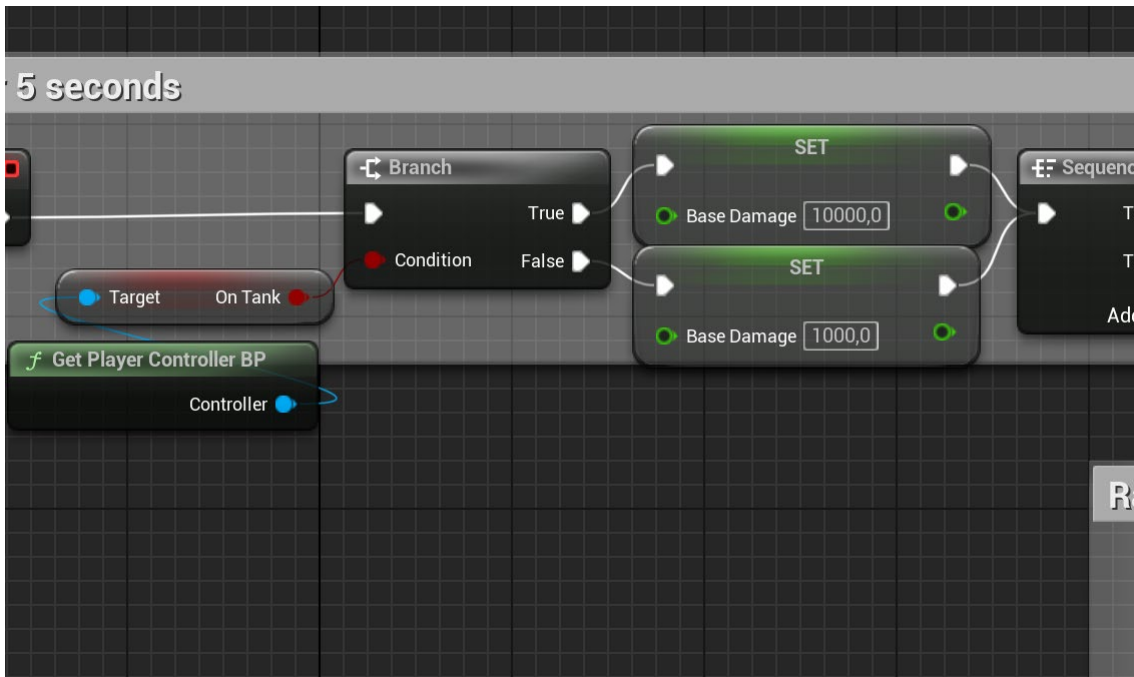


- **Interact With Ladder Logic Update:** Allows players to detach from the ladder at any point by pressing E.

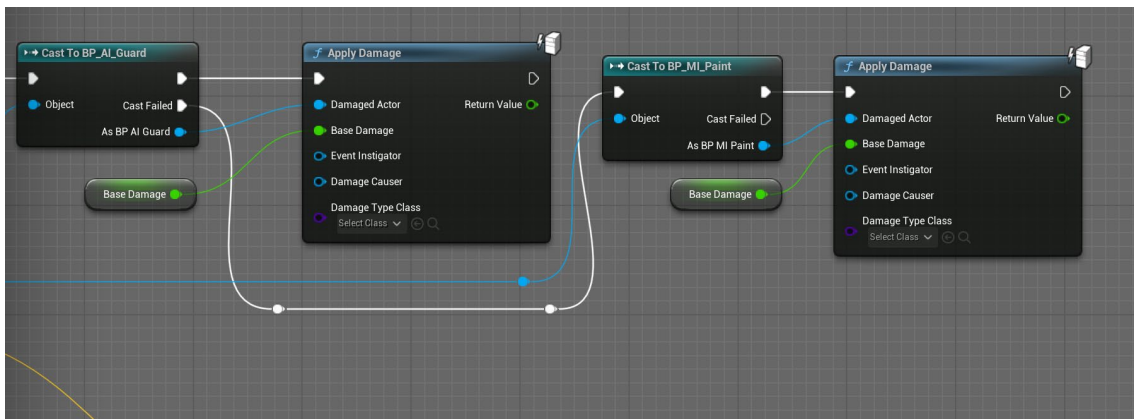


BulletBP

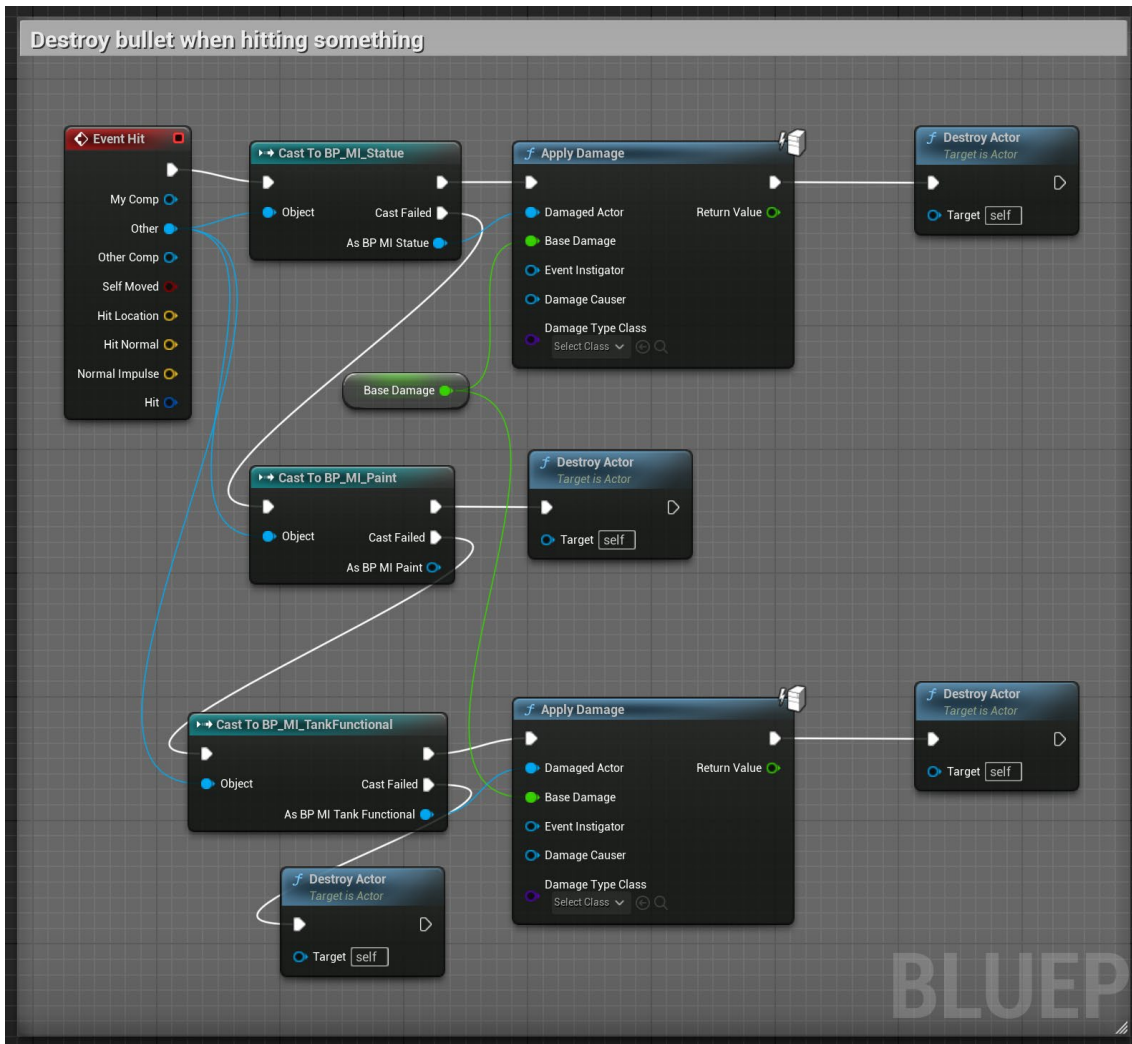
- **Event BeginPlay Adjustment:** Checks if the player is inside the Tank to alter the Base Damage accordingly.



- **Raycast Collision Update:** Adds a check for hitting BP_MI_Paint to apply damage due to the paint slim size.

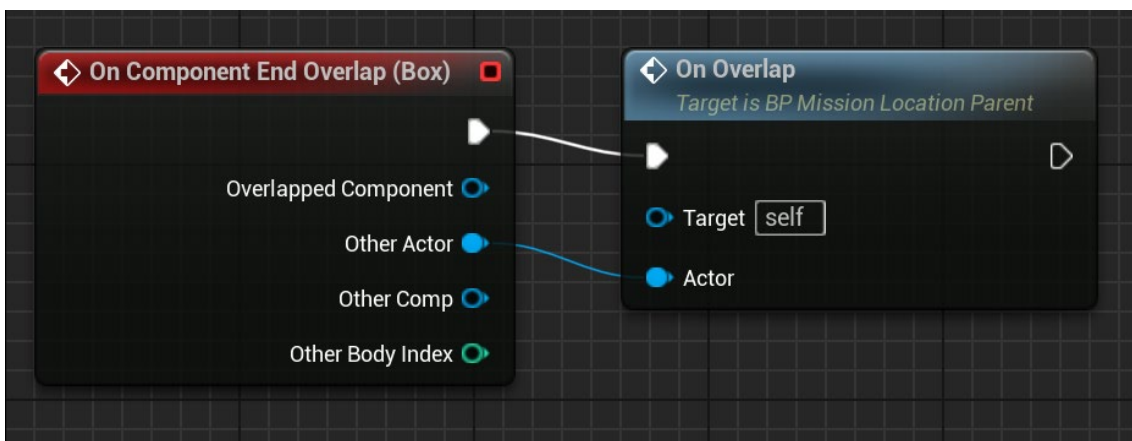


- **Destroy Bullet Logic Revision:** Includes conditions for bullet impact on the Tank or breakable statuses.



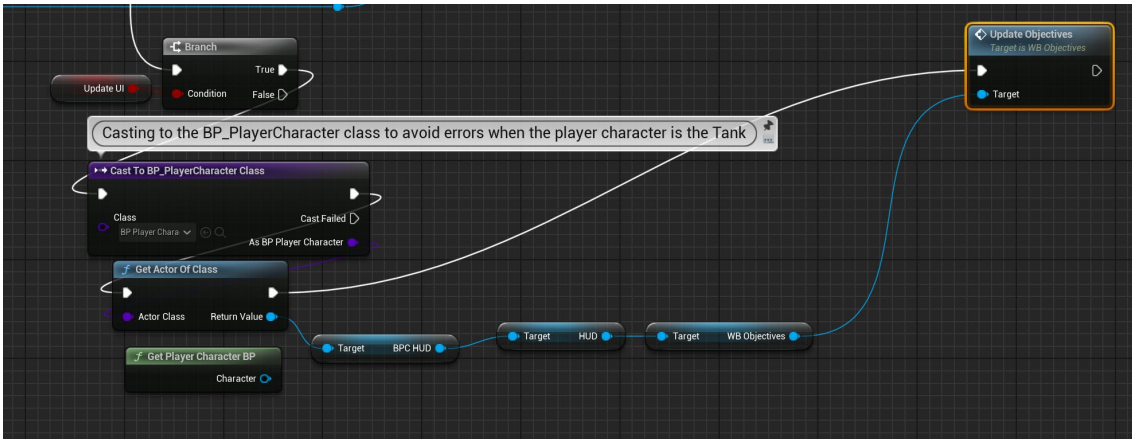
BP_Mission_LocationBox

- **Overlap Event Update:** Sets the overlap when the player exits the collision box, facilitating missions requiring area exit.

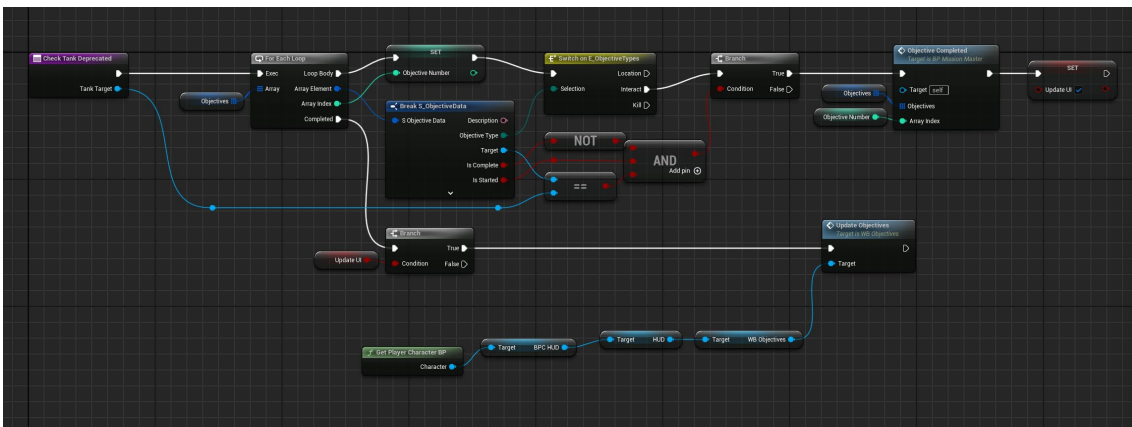


BP_Mission_Master

- **Function CheckInteractObjective Update:** The casting mode was changed to accommodate mission objective completion while controlling the Tank.

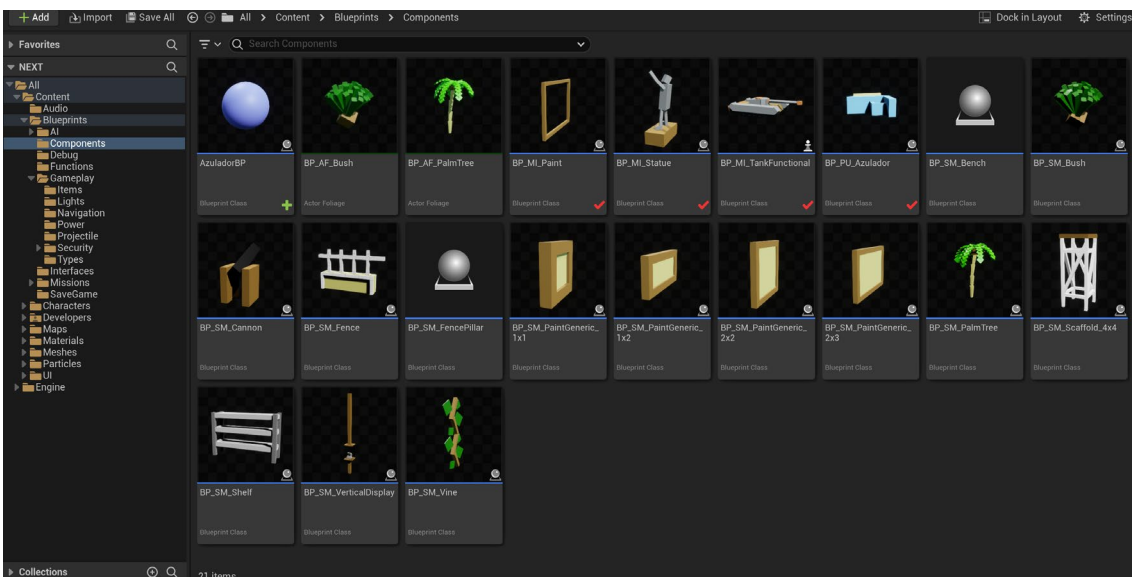


- **New Function CheckTankDeprecated:** Enables setting Tank destruction as a mission objective.



New Blueprint Components

Location: Content/Blueprint/Components

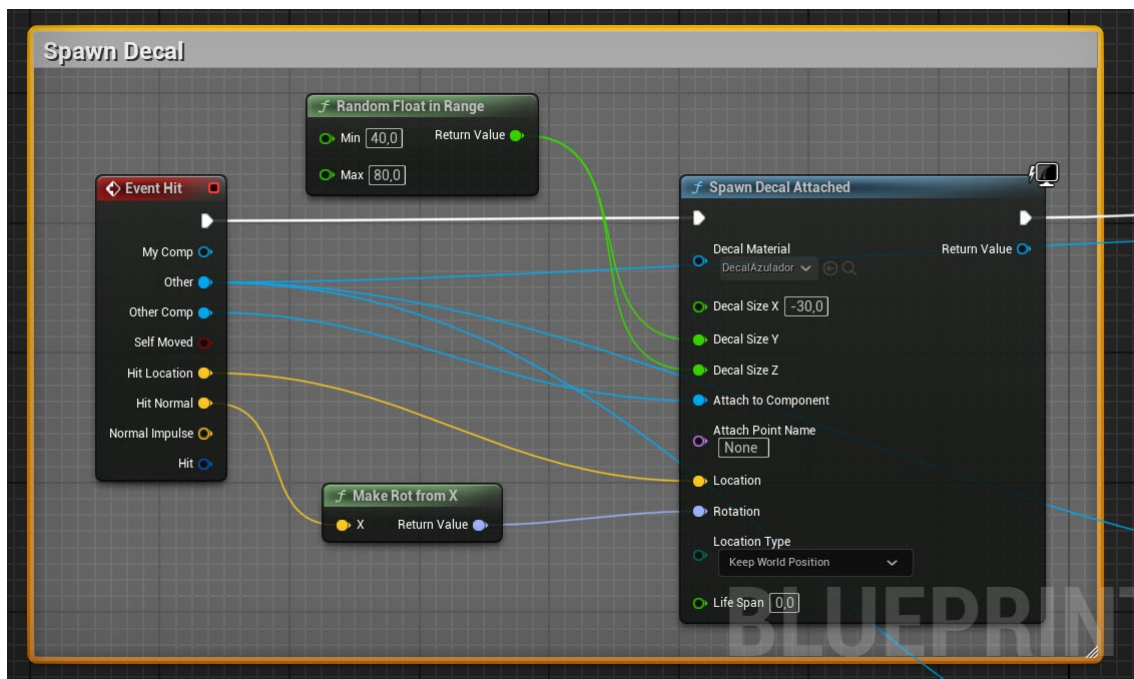


BP_SM Components

- Functionality:** These are simple blueprint actors, labeled as “BP_SM,” primarily serving as containers for multiple static meshes. Their primary purpose is to facilitate easy reuse across different game levels or scenarios. These blueprints are non-interactive and do not contain any embedded code or gameplay logic.

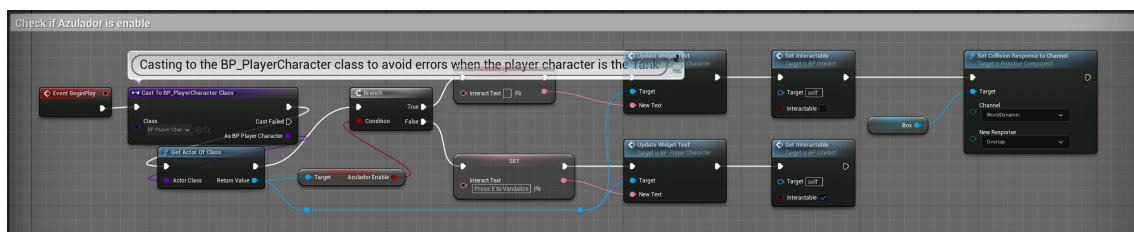
AzuladorBP

- Functionality:** Serves as the main BulletBP with key differences:
 - Decal Generation:** On impact, it generates a visible decal, creating the ink effect.
 - Damage Output:** Delivers lesser damage in comparison to the standard BulletBP, this damage affect a different life variable in the objective components.

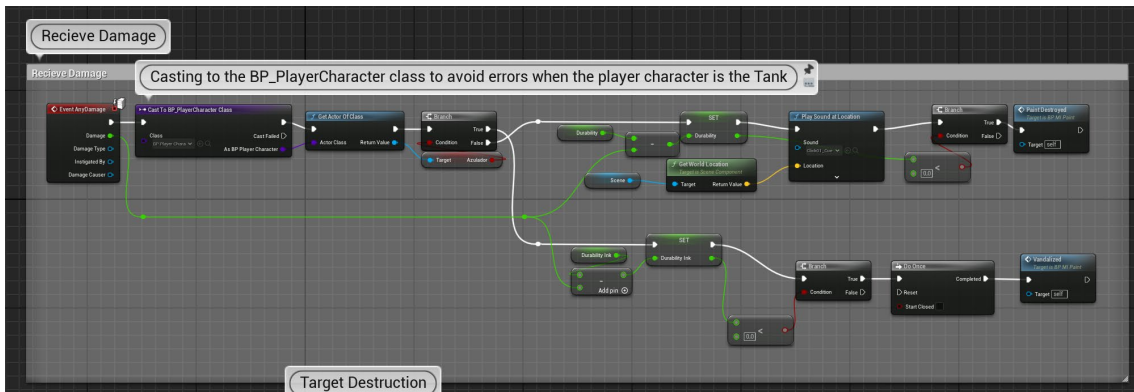


BP_MI_Paint BP_MI_Paint

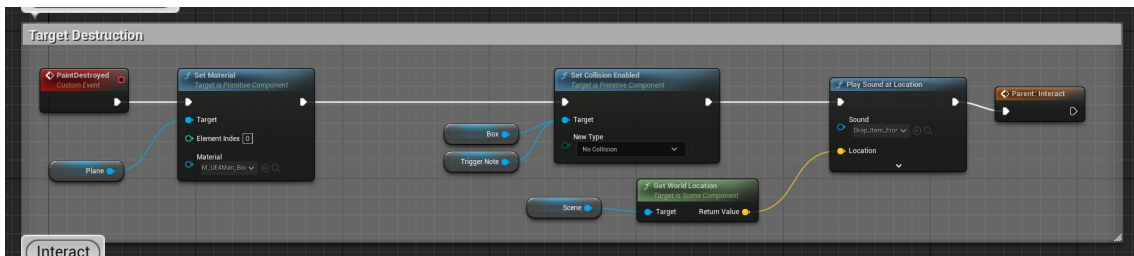
- Type:** Inherits from the BP_Interact class, implying interactive capabilities.
- Behavior:**
 - Initial State Check:** Upon the start of gameplay, it evaluates whether the Azulador is active. If active, the blueprint becomes non-interactive for vandalization by the Interact Event that gameplay session.



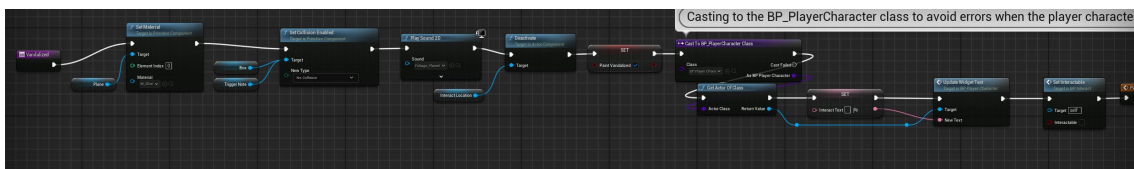
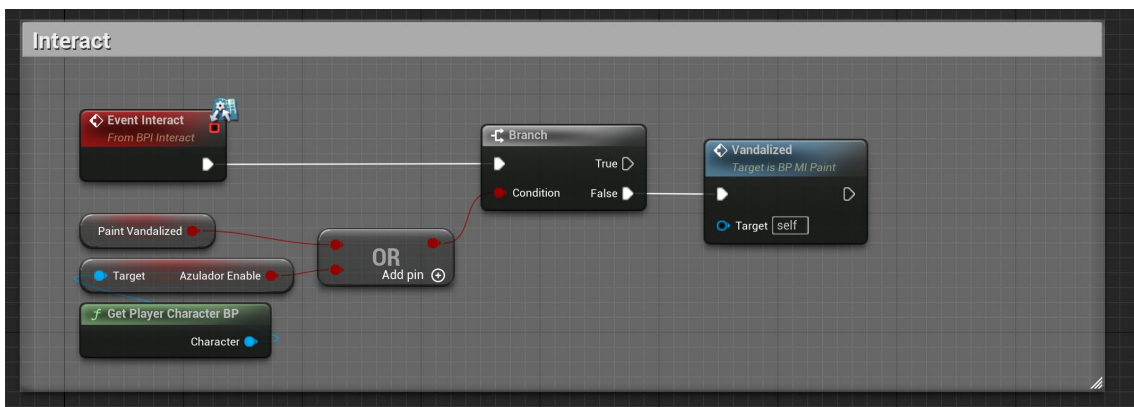
- Damage Differentiation:** Capable of distinguishing between damages inflicted by standard bullets and those from Azulador. It adjusts its response based on the type of damage received.
- Durability Management:** Maintains separate durability metrics for standard and Azulador-inflicted damages, decreasing these values upon receiving hits.



- Triggers specific events when durability variables reach zero:
 - **PaintDestroyed Event:** When standard durability drops to zero, it alters the material to signify destruction and completes any related interactive objectives.



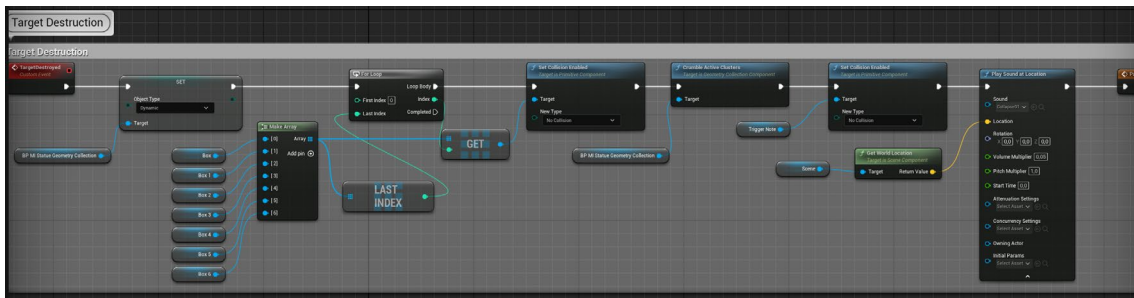
- **Vandalized Function:** Triggered by Azulador shots or interaction events, it alters the material to blue, removes interaction and collision to prevent further engagement, and sets the interaction text to null.



BP_MI_Statue

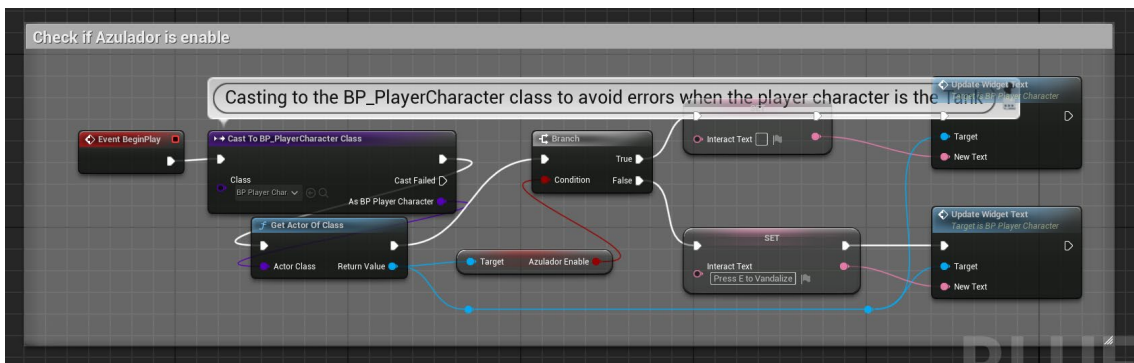
- **Type** A variation of BP_Interact class, similar in functionality to BP_MI_Paint.
- **Unique Features:**
 - **Geometry Collection Mesh:** Incorporates a chaos physic mesh made from modular static meshes from the ModularKit.

- **Destruction Mechanism:** On activating the TargetDestroyed event, it disables collision and triggers the Crumble Active Cluster function. This action fragments the Geometry Collection mesh, symbolizing the statue's destruction, before triggering the completion of related objectives.

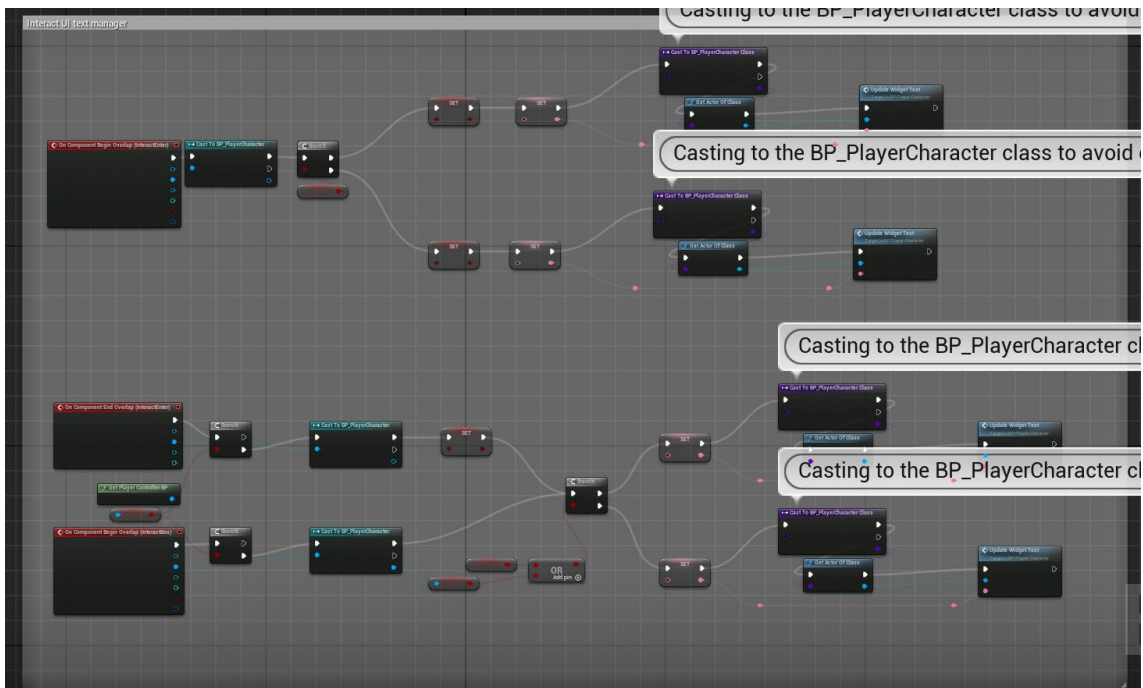


BP_MI_TankFunctional

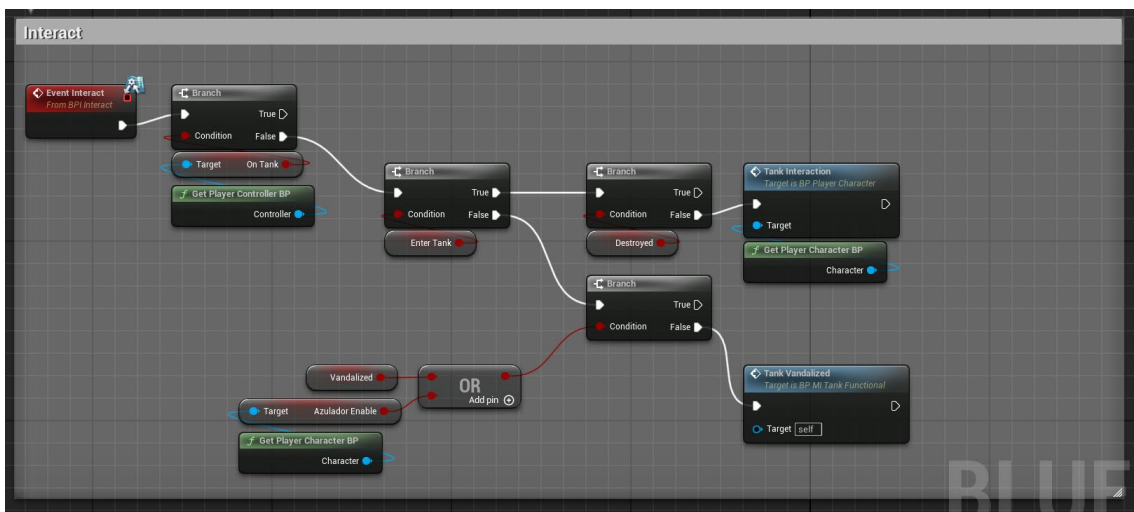
- **Type:** Pawn class, controllable via BP_PlayerController.
- **Functionality:**
 - **Status Check at Start:** Assesses the Azulador's activation status to determine player interaction possibilities by the Interact Event.



- **Interaction Handling:**
 - Incorporates two separate collision boxes, each linked to specific interaction pathways. These boxes are integral to the BP_MI_TankFunctional's interaction logic.
 - Utilizes On Component Begin Overlap events for each collision box. These events dynamically update interaction parameters:
 - One collision box is designated for painting interactions, while the other is for entering and controlling the tank.
 - Interaction options are managed through a series of Boolean flags and UI text variables, which are adjusted based on the player's proximity to the respective collision boxes.
- **UI Integration and Interaction Feedback:**
 - The interaction system is tightly coupled with the game's UI framework.
 - In the BP_MI_TankFunctional's Event Graph, particularly within the Interact UI text manager section, logic is implemented to reflect the player's interaction options based on their position relative to the tank

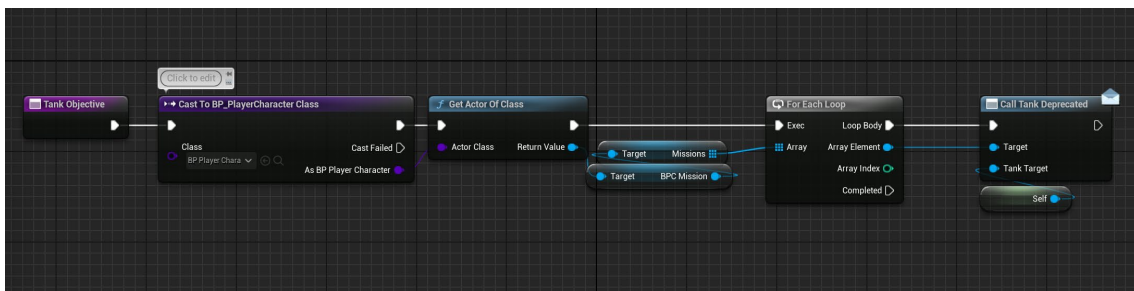
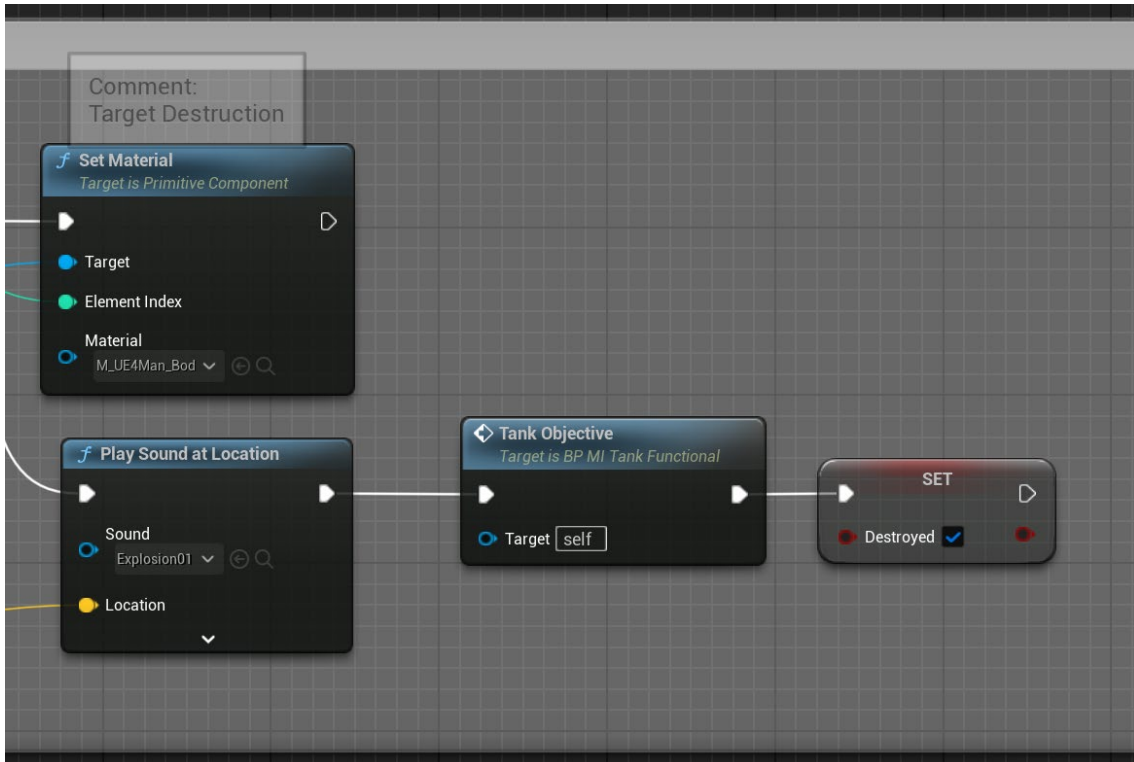


- **EventInteract Functionality:**
 - Follows a logic structure similar to other interactable blueprints like BP_MI_Paint.
 - In scenarios where the Azulador is disabled, the EventInteract is configured to trigger material changes on the tank upon player close interaction, fulfilling specific game objectives.
 - Incorporates conditionals to determine the player's location relative to the tank turret, which then triggers the Tank Interaction event within the BP_PlayerCharacter. This event shifts player control to the tank's operational systems.



- **Damage and Objective Handling Logic:**
 - Features a unique approach to damage reception and target destruction, crucial for mission objective updates. It uses a TankObjective function that casts updated mission statuses to the mission array when destroyed. Additionally, it invokes the

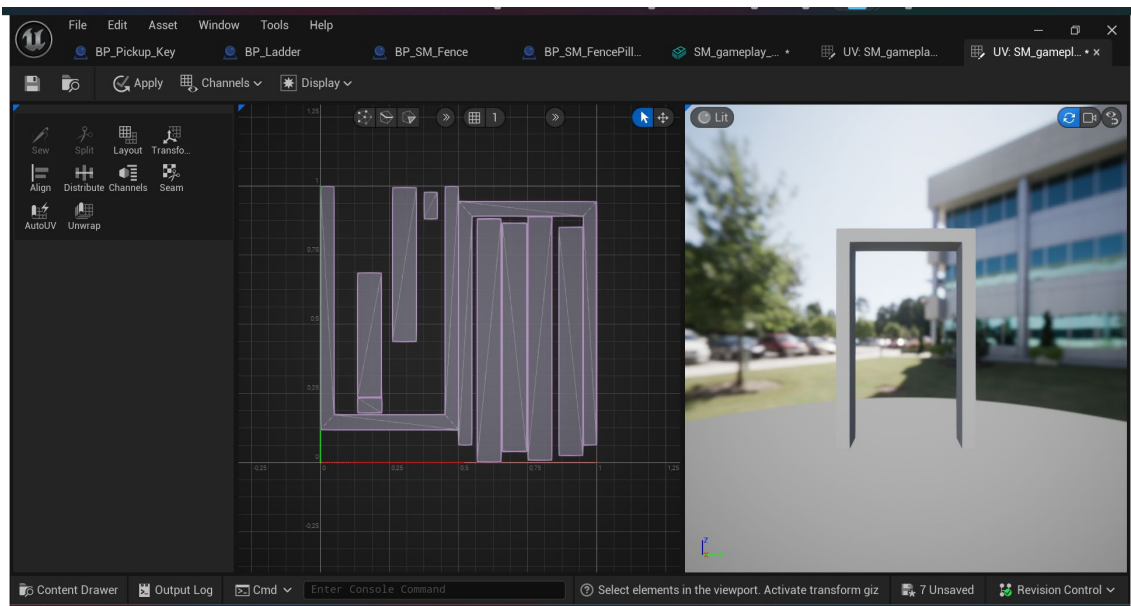
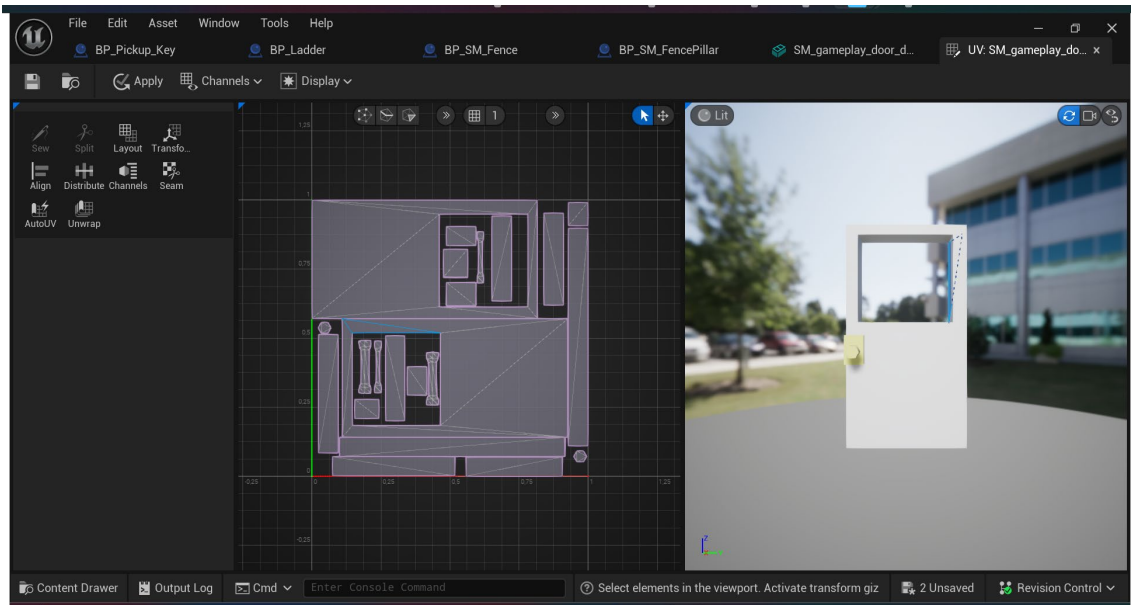
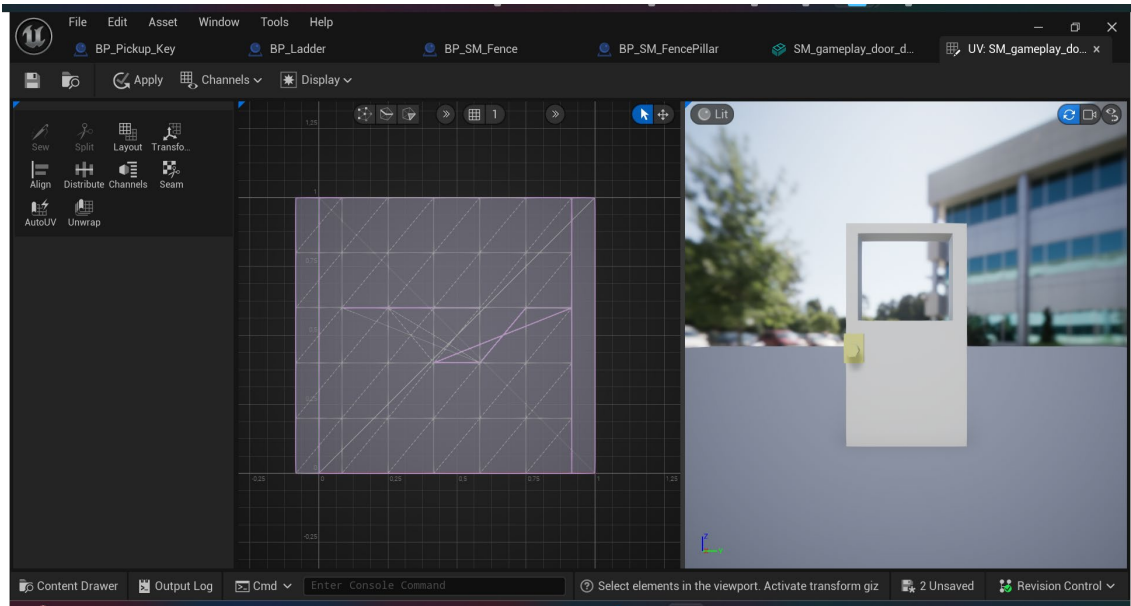
CheckTankDeprecated function in BP_Mission_Master to validate the completion of tank-associated objectives without relying on BP_Interact class interact events.



Fixed Bugs

1. Overlapping UVs on Static Meshes:

- Issue:** The static mesh SM_gameplay_door_default and SM_gameplay_door_frame_single had overlapping UVs, causing alert notifications during light build.
- Solution:** UVs were properly unwrapped to resolve the issue. This prevented any further alert notifications during the light build process.

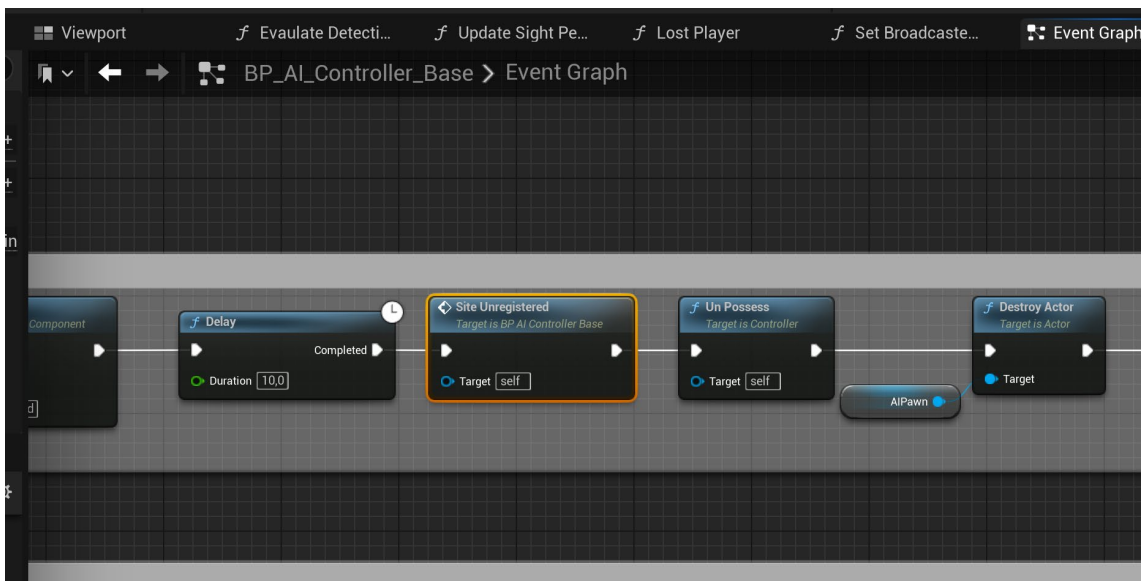


2. Atmospheric Effect Overlap:

- **Issue:** Initially, two atmospheric effects were overlapping in the project, causing errors during light building.
- **Solution:** The issue was resolved by setting the render visibility of the SkyAtmosphere to off, fixing the overlap problem without any visual degradation.

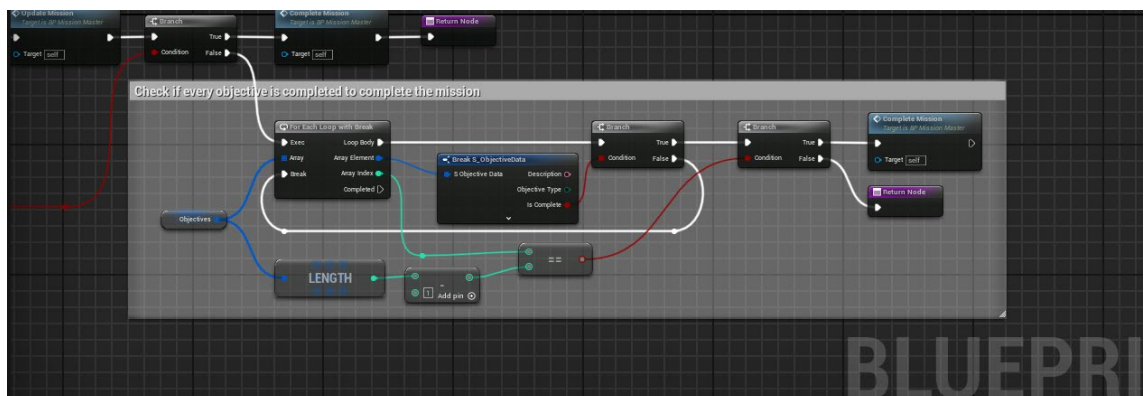
3. Enemy AI UI Call Post-Deletion:

- **Issue:** Enemy AI was attempting to call the UI after the pawn had been destroyed, leading to numerous errors post-pawn elimination.
- **Solution:** Updated the code to cease UI calls prior to the deletion of the pawn, effectively eliminating the error generation.



4. Mission Completion Handling

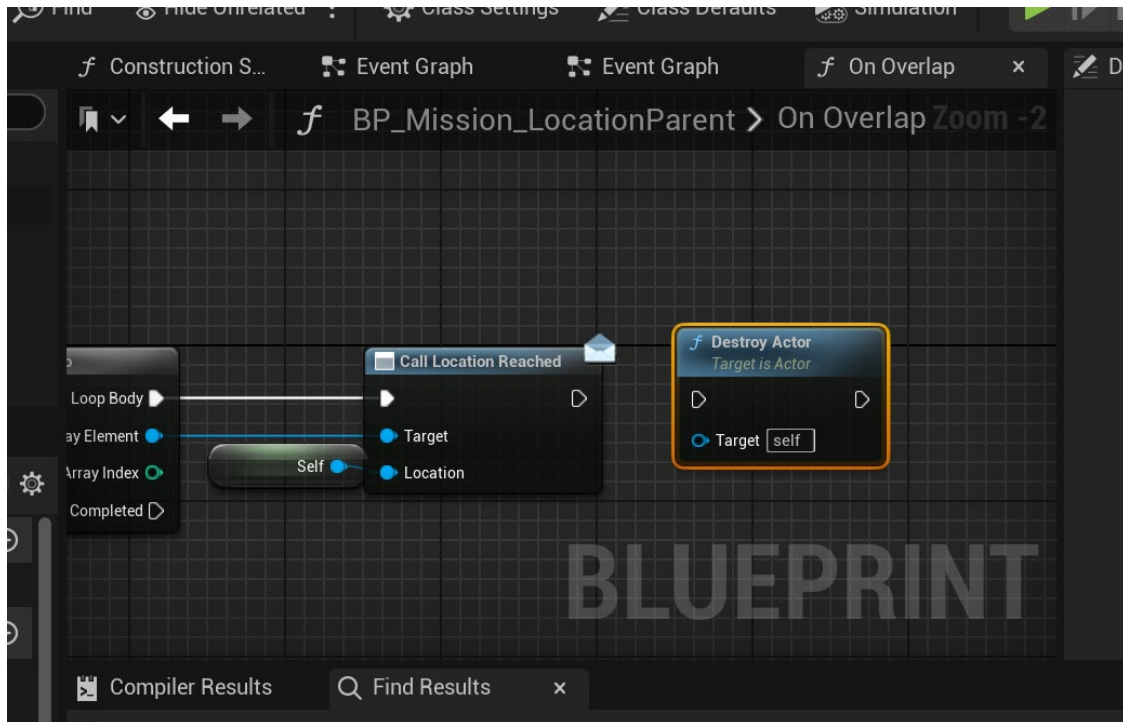
- **Issue:** The mission handle failed to set the mission as completed after fulfilling multiple objectives.
- **Solution:** Added a new section to check every objective in the array and ensure the mission is concluded as soon as all available objectives are completed.



5. Blueprint BP_MissionLocationParent Actor Destruction

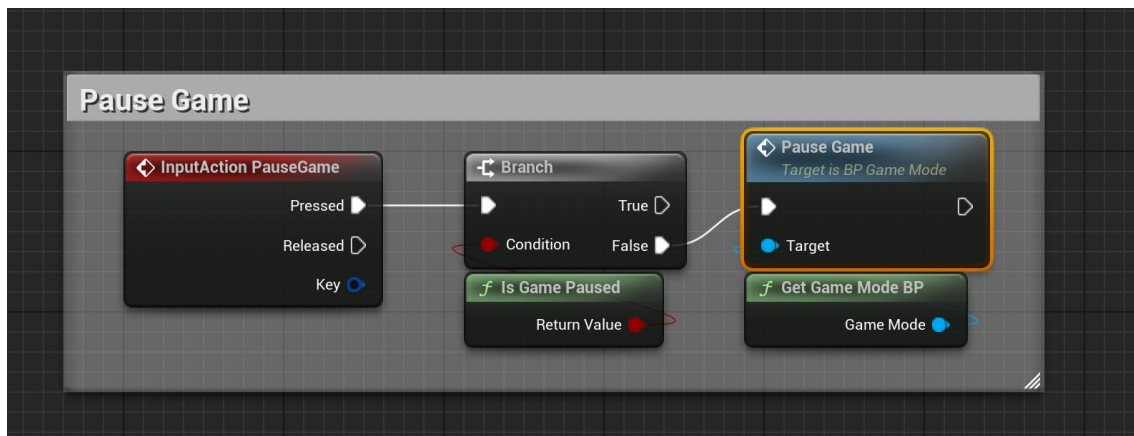
- **Issue:** The destroy actor node in BP_MissionLocationParent was causing bugs by destroying the actor upon overlap, even before mission attribution, leading to a halt in mission progression.

- **Solution:** Removed the destroy actor node from the Blueprint, enabling proper functionality.



6. Pause Menu Functionality

- **Issue:** Initial malfunctioning of the pause menu, caused by inverted logic in the branch node in BP_PlayerController.
- **Solution:** Corrected the logic in the "Pause Game" section by changing the output from True to False in the branch node.



7. Player Interaction with Ladders.

- **Issue:** Players were floating over the ladder, bypassing the position where upward movement should be restricted.
- **Solution:** The BP_Ladder blueprint was updated to provide a more natural and intuitive interaction. Players now automatically exit the ladder upon reaching the top or bottom and can press 'E' at any point on the ladder to exit it avoiding the bug.