DAY 6

Utkarsh

Contents

Introduction

We covered User Interfaces in UE5 on day 6. Our only goal for this class is to make a basic functioning Main Menu. Make sure to include the 3rd person template while making your project We will be making/modifying only 3 assets.

- ThirdPersonMap (comes with 3rd person template)
- MainMenu (new empty level)
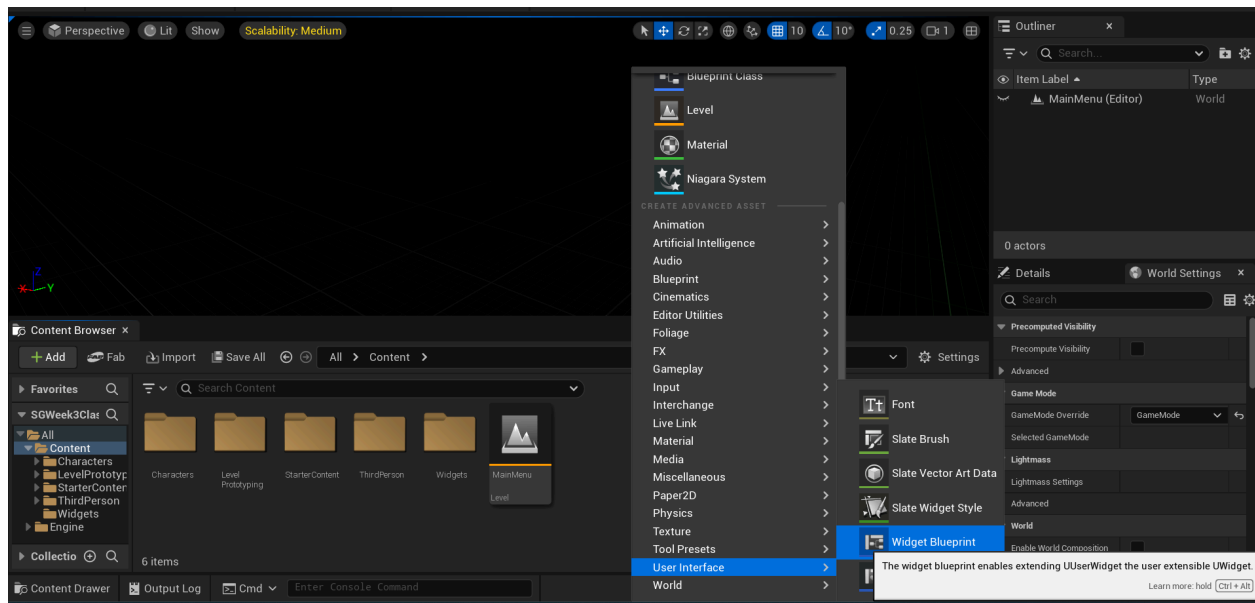- WBP_MainMenu (new Widget Blueprint)

1. Widget Blueprints

Description:
Widget Blueprints are UE5's system for creating user interfaces. They allow you to design visual UI elements and program their behavior through Blueprint nodes.

How to Create and Modify Widget Blueprints

1) **Creating a Widget Blueprint:**
   - Right-click in the Content Browser
   - Select "User Interface" → "Widget Blueprint"
   - Name it "WBP_MainMenu"
   - Double-click to open the Widget Blueprint Editor

2) **Designing the UI:**
   ○ The Widget Blueprint Editor has two main modes:
      i) **Designer Tab**: Visual layout editor
   ii) **Graph Tab**: Blueprint scripting for functionality
3) **Basic Main Menu Setup:**

   Search for the required elements in the 'palette' window on the left

   ○ Add a **Canvas Panel** as the root widget
   ○ Add UI elements from the Palette(as children of canvas):
      i) **Text** widget for the game title
      ii) **Button** widget for the "Play" button
   ○ Position and style elements as needed
      i) Change the **Anchor** to the required position i.e- in this case the center for your text and play button
      ii) You can modify the text as you please using the details panel. Our main focus here was the **Content** tab where you can change what the text says, and **Appearance** tab where you can change your text color, opacity font, size etc.
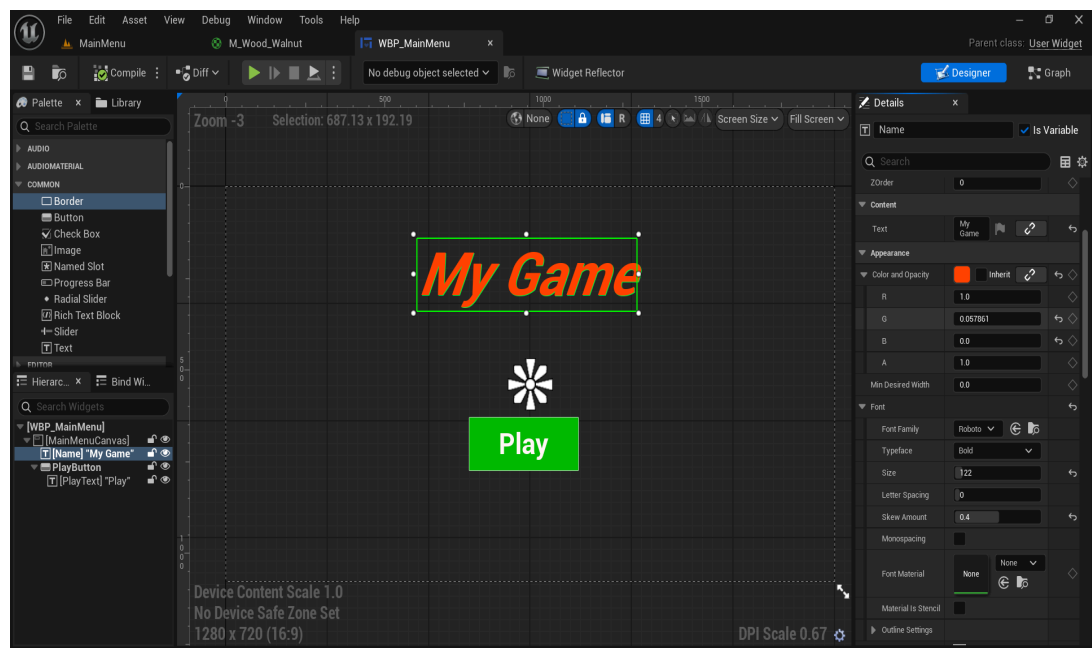
- You can use **size to conten**t to expand or shrink the size of your text box to perfectly fit your text
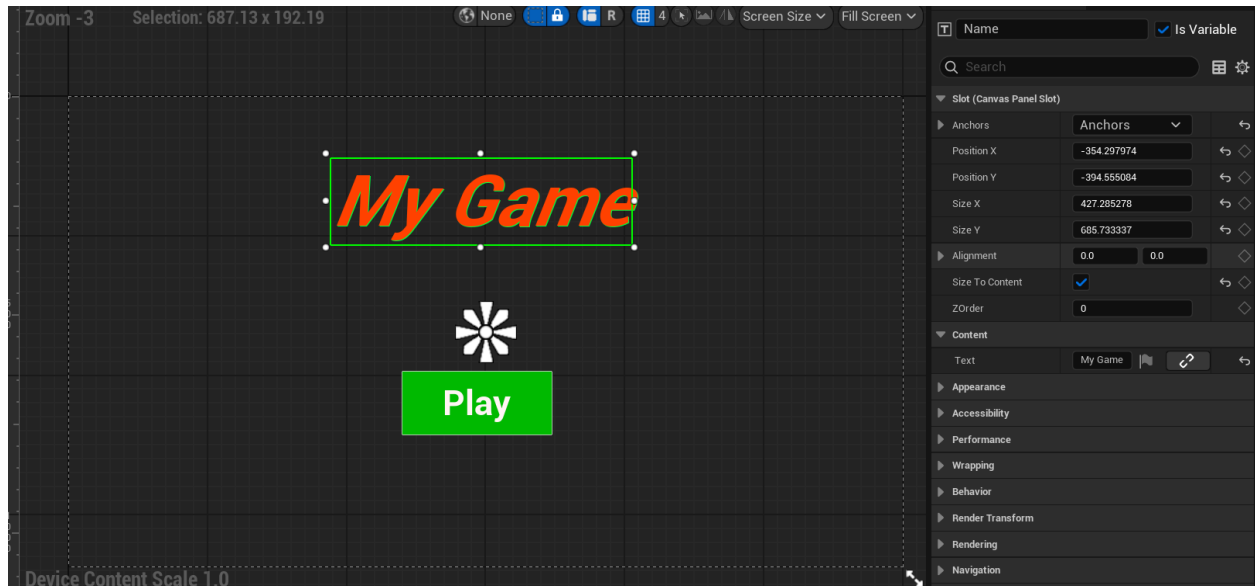
- You can style your button the same way as your text.
- Note that color and opacity for button changes the colour of the child text where background color changes the color of the button itself
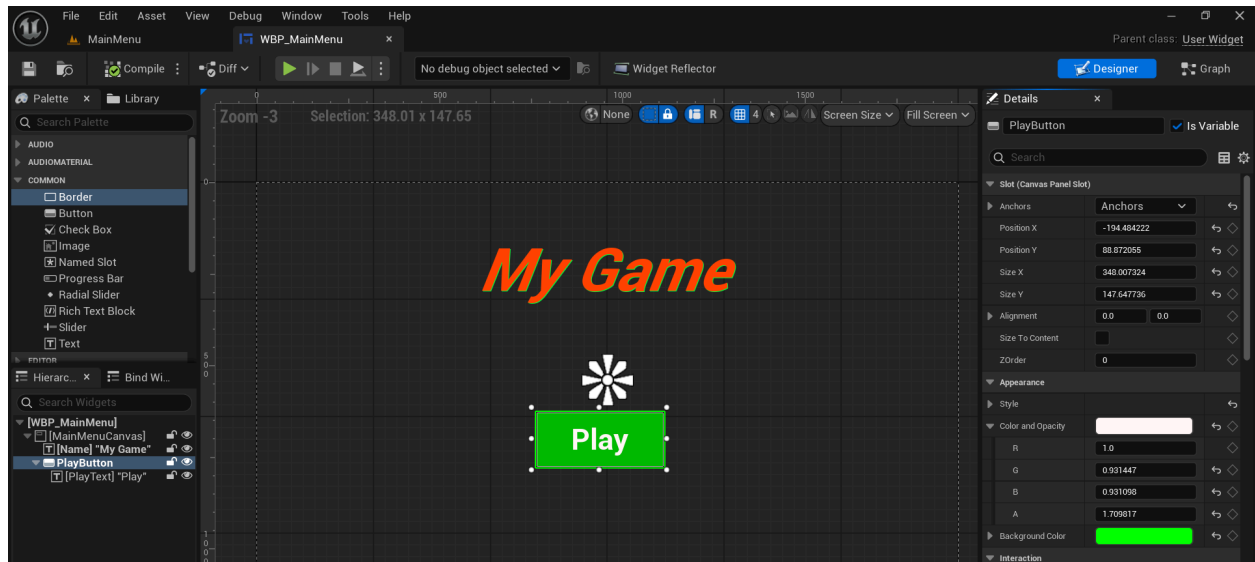
2. WBP_MainMenu Graph (Blueprint Logic)

Button Interaction Logic

The Widget Blueprint's Graph tab contains the logic for UI interactions:

On Hovered Event

- **Event**: On Hovered (PlayButton)
- **Action**: Set Background Color
- **Target**: PlayButton
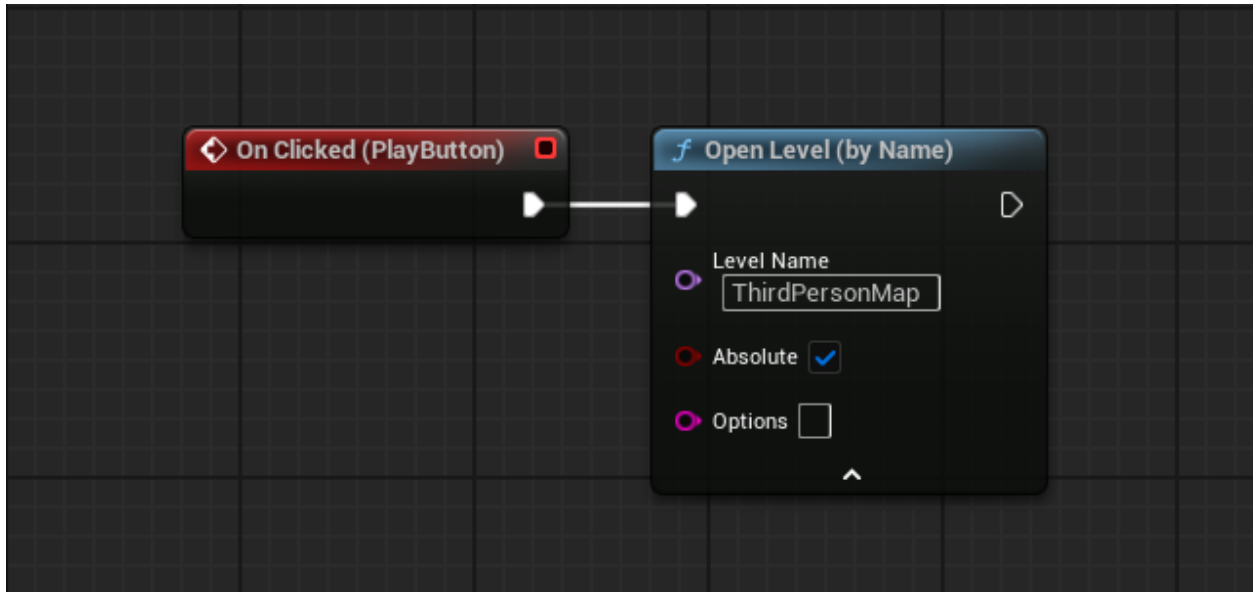- **Color**: Cyan/Light Blue (visual feedback)

On Unhovered Event

- **Event**: On Unhovered (PlayButton)
- **Action**: Set Background Color
- **Target**: PlayButton
- **Color**: Original Play Color (revert to default)
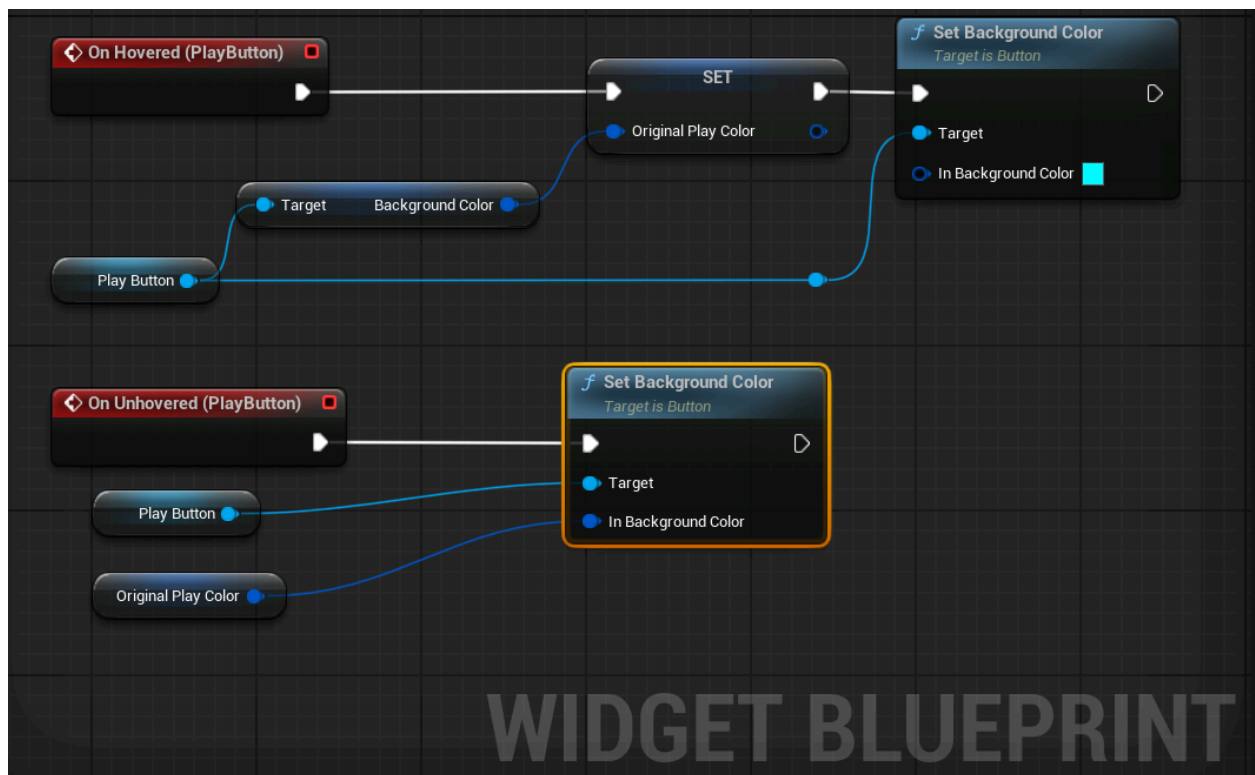
On Clicked Event

- **Event**: On Clicked (PlayButton)
- **Action**: Open Level (ThirdPersonMap)
- **Function**: Open Level node to transition to gameplay

Key Nodes Explained

- **Set Background Color**: Changes the visual appearance of UI elements
- **Open Level**: Loads and transitions to a different level/map
- **Target**: Specifies which widget the action applies to

3. Level Blueprints
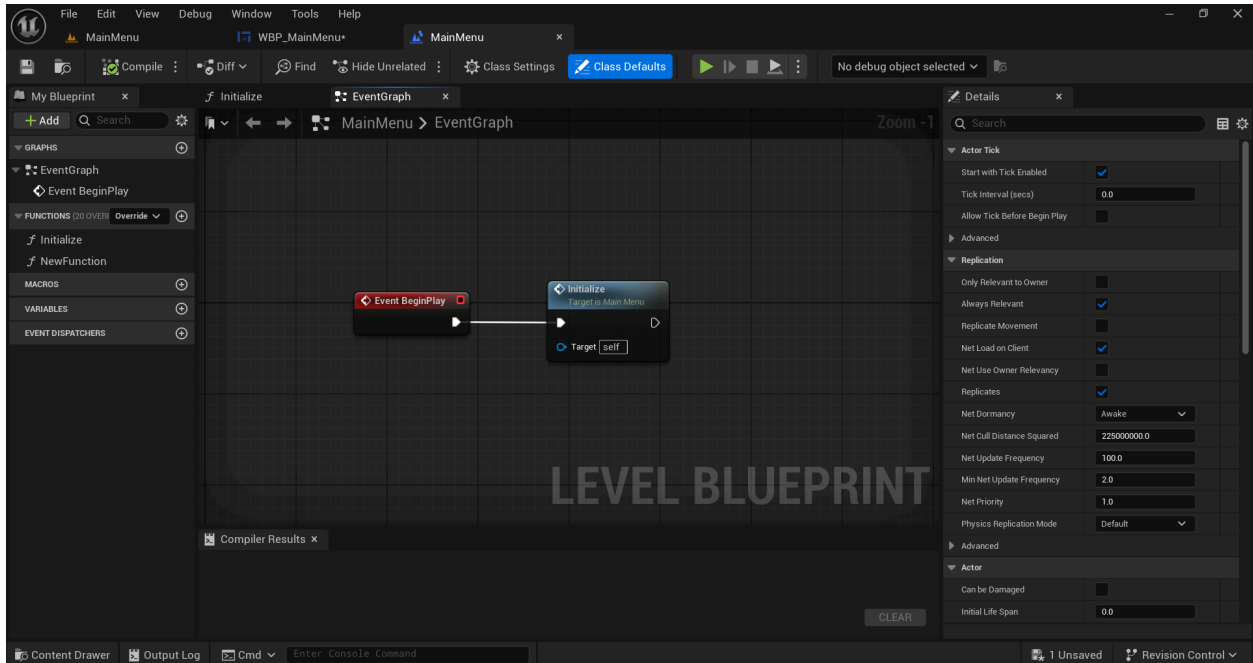
How to Access Level Blueprints

1. In the main editor, go to the toolbar
2. Click **"Blueprints"** dropdown menu
3. Select **"Open Level Blueprint"**
4. This opens the Blueprint graph for the current level
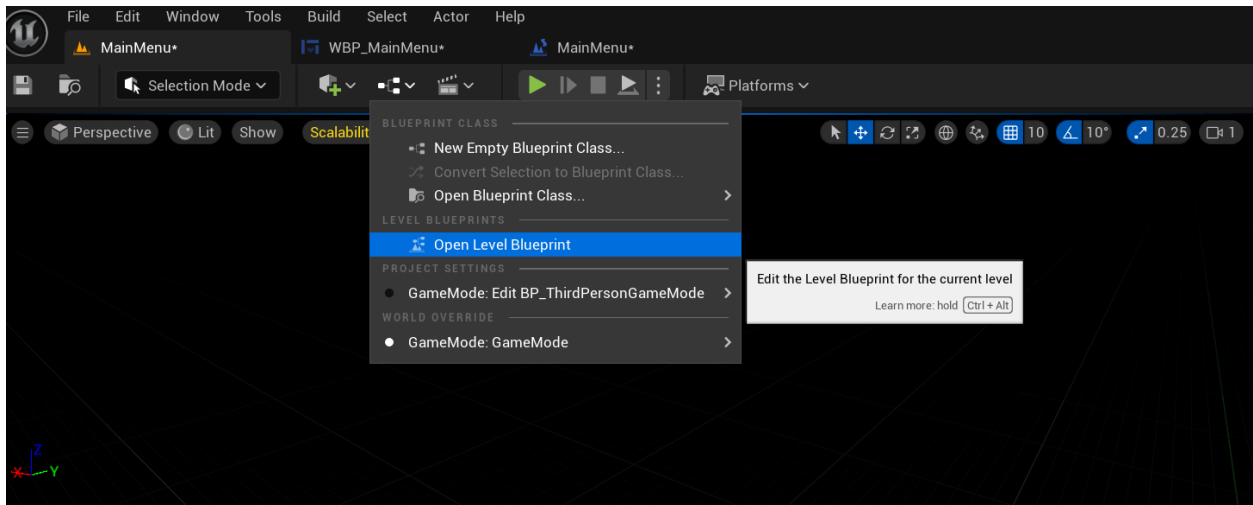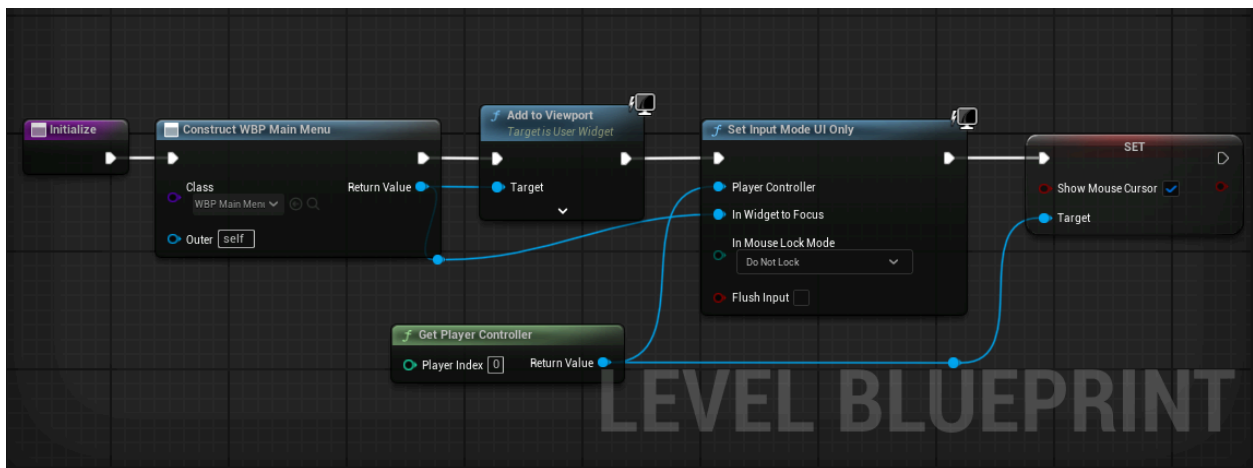

Main Menu Level Blueprint

The MainMenu level needs to:

1. **Initialize the UI system**
2. **Create and display the main menu widget**
3. **Set up proper input handling**

Initialize Function Chain

```
Event BeginPlay → Initialize → Construct WBP Main Menu → Add to
Viewport → Set Input Mode UI Only
```


Node Breakdown:

- **Event BeginPlay**: Automatically runs when the level starts
- **Initialize**: Custom function to set up the menu
- **Construct WBP Main Menu**: Creates an instance of the widget
- **Add to Viewport**: Makes the widget visible on screen
- **Set Input Mode UI Only**: Ensures mouse cursor is visible and UI can receive input
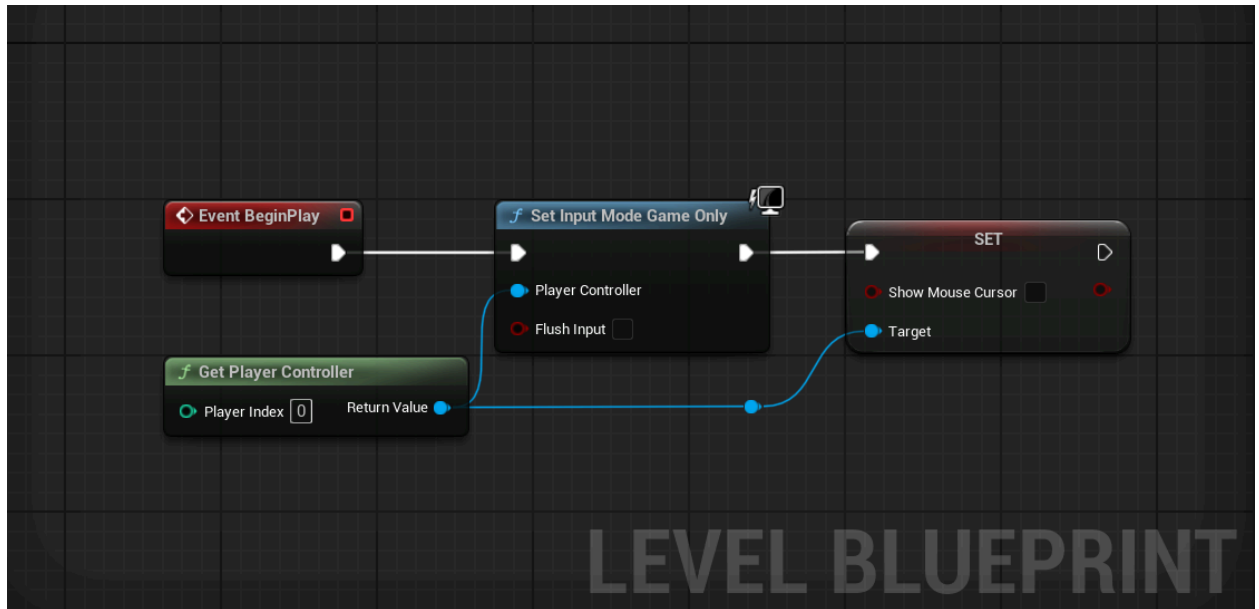
Third Person Map Level Blueprint

The ThirdPersonMap level should handle:

1. **Transitioning from UI to gameplay**
2. **Setting proper input mode for gameplay**

Gameplay Initialization

```
Event BeginPlay → Set Input Mode Game Only
```


Node Breakdown:

- **Set Input Mode Game Only**: Hides mouse cursor and focuses input on game controls
- **Get Player Controller**: Gets reference to the player's input controller
- **Player Index 0**: Refers to the first (primary) player

4. Widget Hierarchy and Organization

Proper Widget Structure:

```
Canvas Panel (Root)
├── Background Image (optional)
├── Title Text
├── Button Container (Panel)
│   ├── Play Button
│   │   └── Play Text
│   ├── Options Button (future)
│   └── Quit Button (future)
└── Footer Text (optional)
```

Naming Conventions:

- Use descriptive names for all widgets
- Prefix with widget type when helpful (e.g., "PlayButton", "TitleText")
- Keep names consistent across similar UI elements

5. Common Issues and Solutions

Widget Not Appearing:

- Ensure "Add to Viewport" is called
- Check if widget is properly constructed
- Verify input mode is set to UI Only or Game and UI

Button Not Responding:

- Confirm "On Clicked" event is properly connected
- Check if input mode allows UI interaction
- Ensure button is not blocked by other UI elements

Level Not Loading:

- Verify level name is spelled correctly in "Open Level" node
- Ensure target level exists in the project
- Check for any Blueprint compilation errors