

Advanced Gameplay Assignment – Péter Gulyás

This project was developed in Unreal Engine 5.5 and heavily utilizes the Gameplay Ability System (GAS).

My goal was to prepare for my upcoming degree project, which I plan to build using GAS. Unfortunately, I underestimated the amount of boilerplate setup required for proper GAS integration, resulting in the lack of a game-like experience.

I implemented the Event Handler similarly to what was demonstrated in the lectures. It manages game states such as the main menu, gameplay state, and pause menu. Initially, I attempted to implement a static instance of the Event Handler, but due to Unreal's handling of static objects—where they persist through entire play sessions and remain in memory until the engine is shut down—I opted to use a `GameInstanceSubsystem` instead. This approach aligns more with Unity's `DontDestroyOnLoad`, as the `GameInstance` remains consistent across level transitions.

Additionally, I utilized the Event Handler to create a simple AI opponent for the player. The AI has two states:

- Chasing the player
- Attacking when within a certain range

Controls:

- Movement: WASD
- Shooting: Left Mouse Button (LMB)
- Pause: 'Esc' & 'P'

Key Scripts for the Assignment:

- Event Handling: `DP_EventHandler`, `DP_Event`, `DP_MainEventHandlerSubsystem`,
- UI: `DP_MainMenuWidget.h`, `DP_PauseMenu`, `DP_EventUserWidgetBase`
- Gameplay & AI: `DP_GameMode`, `DP_EnemyCharacter`, `DP_AIAttackEvent`, `DP_AIChasePlayerEvent`

Blueprint Implementations:

- Enemies & AI Events: `BP_MeleeEnemy`, `BP_AIAttackEvent`, `BP_AIChasePlayerEvent`
- UI: `WBP_MainMenu`, `WBP_PauseMenu`

The remainder of the project is mainly focused on GAS implementation.

Unfortunately I am not able to modify the assignment on Omniway after submitting it so the build is available [here](#).