

# Escape Multi

## 1. Essential

- 1) **Fork** the project on your account from this github link :  
<https://github.com/RBasic/EscapeMulti>
- 2) Update the Unreal project to **version 5.4**.  
Compilation errors are present and are preventing the update. You must debug the code and recompile the project without the editor. Hint : Read the logs.  
The project will not need anything with VR or AR, so feel free to clean everything related to it.
- 3) Update the map used on launch for both editor and package  
The wrong map is being used when opening the editor
- 4) Find and fix the issue causing the scene to be entirely dark.

## 2. Optimization

- 1) The scene is filled with optimization issues. Fix as many as possible using the methods covered in class.

## 3. Gameplay

- 1) There is no character blueprint for the player, do the questions listed below in C++ in the EscapeMultiCharacter class until we derive it in BP.
- 2) Change the camera position by setting the cameraBoom's **armLength** to 1400.
- 3) The camera rotates based on the player, which is not desired in a top-down game.  
Set the cameraBoom to **absoluteRotation** with the values :
  - a) pitch : -60
  - b) yaw : 220
  - c) roll : 0
- 4) Derive the Character C++ class in a blueprint class, the gameMode is coded in C++, you will need to **reference** the blueprint class in the C++ code.
- 5) Set up the animation system and the player's animation blueprint.
- 6) Fix the issue where the player cannot move freely throughout the scene.
- 7) The mouse decal is not displaying correctly. Identify the issue and fix it.

## 4. AI System

- 1) The enemy has no animations attached to its skeleton. Use the animations from the Bossy Enemy pack and **retarget** them to the Knight's skeleton.

- 2) The enemy's AI system doesn't seem to be working correctly. Identify the errors and fix them.
- 3) In the enemy's Behavior Tree, implement a system that rotates the enemy 180° every 5 seconds.
- 4) Now, add a player detection system. If the enemy sees the player, it should run towards them and launch an attack. If the attack hits, the level restarts; otherwise, the chase continues.

## 5. Multiplayer Gameplay

- 1) The prototype is meant to be played with 2 players online :
  - a) the first player is a standard character with no special input (only movement)
  - b) the other is a ghost that can "possess" an enemy to make him rotate like we did in the AI part
  - c) Both players are still in top down view, no need to change anything on this part.

Implement the mechanics for the second player, paying special attention to **replication** and **optimization**.

- 2) Unplug the 5 seconds condition from the enemy behavior tree and replace it with the second player mechanic.

## 6. Cleaning

- 1) After your work, many assets will be unused. Perform a complete cleanup of the project by removing everything that is no longer necessary for launching and packaging the project. Organize the project according to **Allar's convention**.
- 2) Push your project on your github fork, be cautious with **ignored files**.