## IMPROBABLE Homework

1. Path of the homework:

The project is forked from SpatialOS/StartProject.

<https://github.com/monkeykane/UnrealGDKStarterProject.git>

1. Reference:

2.1 UE4/ShootGame: Grenade, Bot and AI behavior

2.2 SpatialOS/ThirdPersonShooter: Score board, GamePawn (Health, takedamage)

1. Homework:

3.1 Grenade:

(1) Press ‘G’ to spawn a grenade in player hand.

(2) Release ‘G’ to throw it.

(3) Grenade will explode after 5 seconds. Grenade will not explode when holding in hand.

(4) Damage of Grenade:

Radial Damage: Damage from 300 to 0 within radius of 5 meters.

Impact Damage: Damage == 100, when first hit a pawn.

1. Use skin color to show Pawn’s health:

Max Health is 1000.

White > Yellow > Red > Black.

When health is 0, it will be recover after 5 seconds.



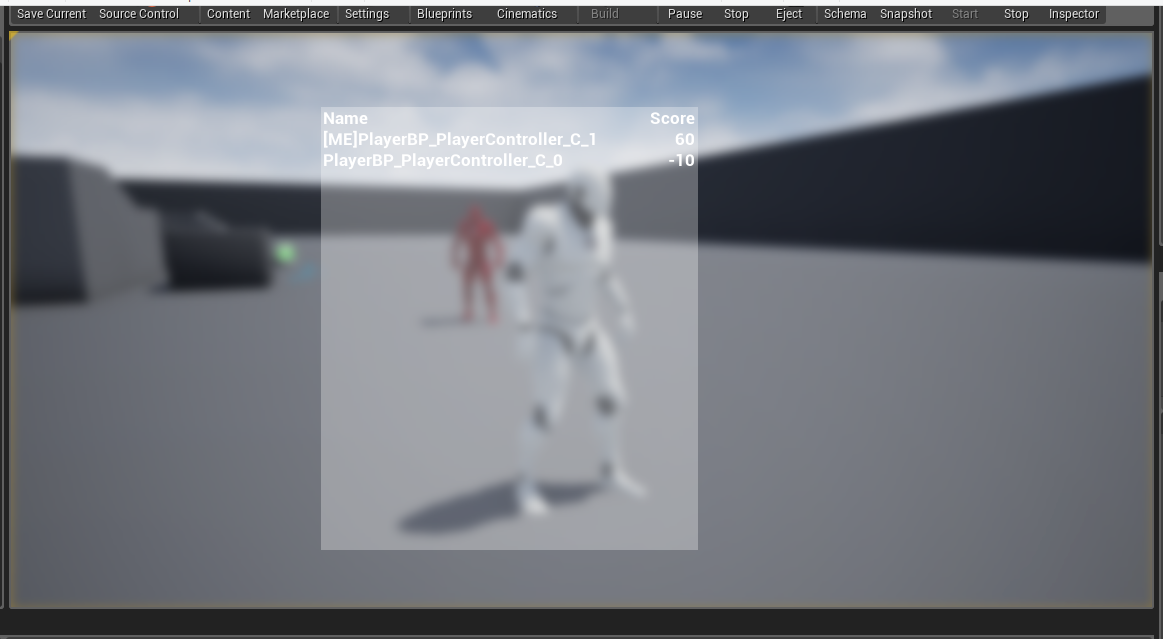
3.2 Highscore board:

(1) Press ‘Tab’ to show Score board.

(2) The player list is sorted by player score.

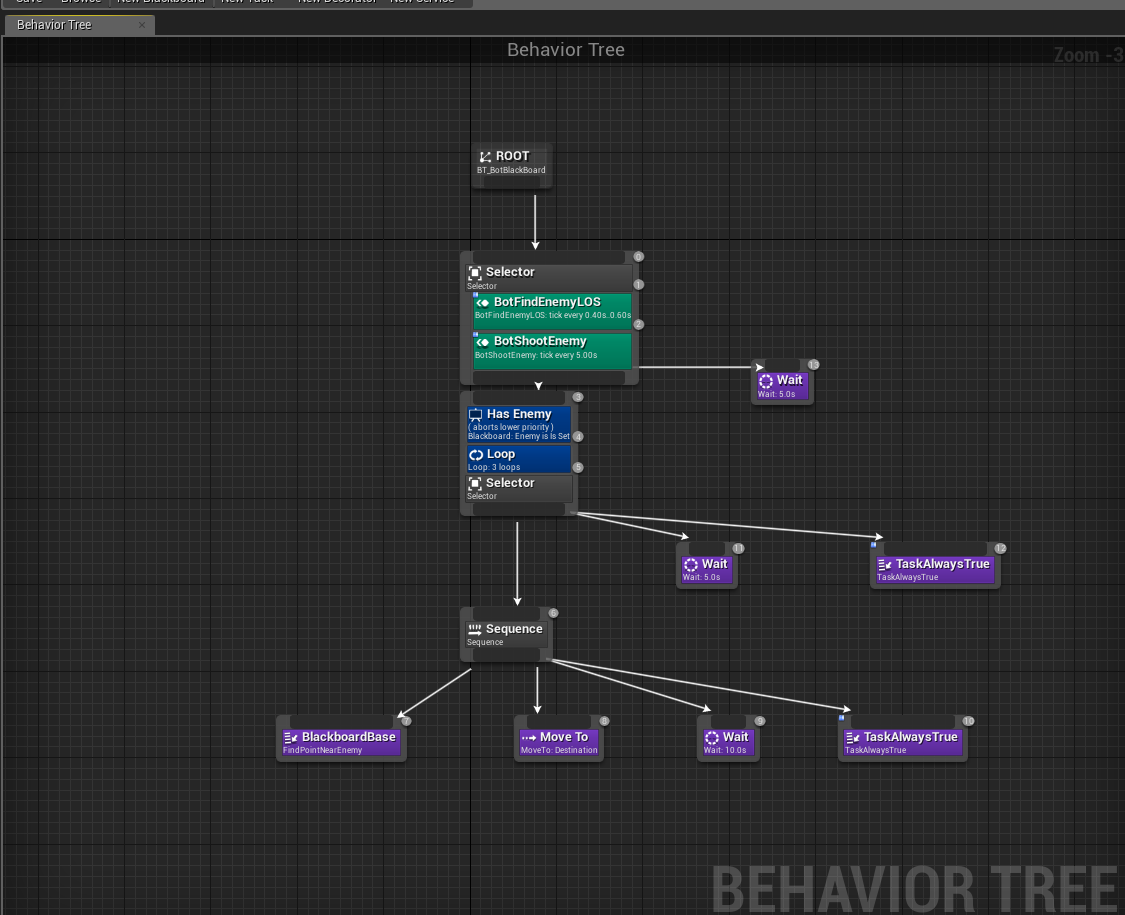
(3) Kill a pawn or bot: score += 30.

Suicide: score -= 20.



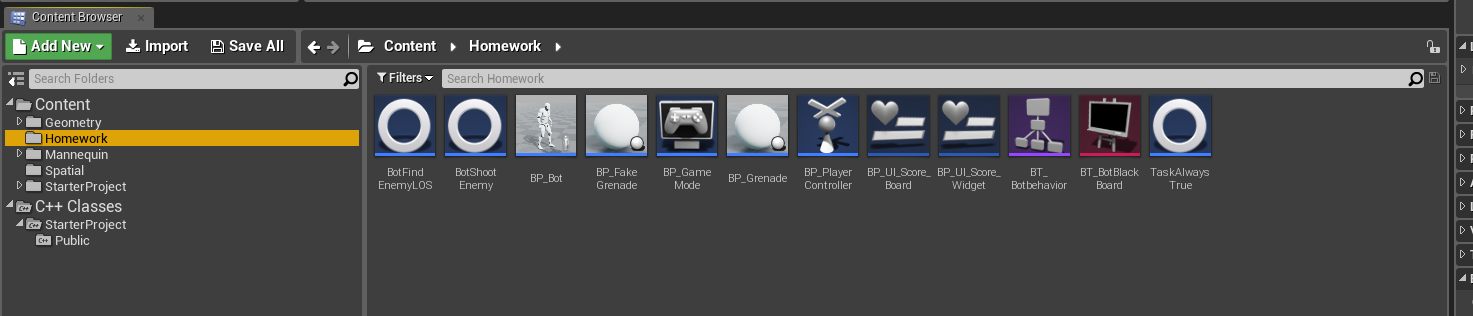
3.3 AI behavior:

Behavior Tree is used for Bot. The bot will find the closest enemy and use grenade to attack it.



3.4 The project structure:

Blueprint: All blueprint objects are located at /Content/Homework

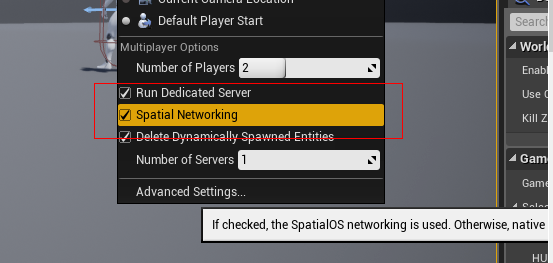


C++ code: All c++ codes are located at /C++ Classes/StarterProject/Public



1. Issues:

AIController could not be spawned regularly when Spatial Network is on.



1. Place AIBot in map.
2. After game starting, AIController is not spawned and Possesses Bot.
3. Shutdown Spatial Network and restart again. AIController can be spawned.

Patch codes to fix it:

