Bluegravity- Test Game Development Summary

Blueprints and explanation:

The main Character AnimBP(5h) – This blueprint helped to transitions between the animations, and the joints in the skeleton to force the feet of the player to stick to the skateboard.

UMGs(3h)- These Blueprints display the game start and the game over using C++ functions to deliver the score.

C++ Classes and explanation:

C++ Obstacle (8h): has a dynamic static mesh changer, so you can keep the functionality of the points and change the appearance of the actor.

The obstacle change color to show if the player got over it, and there is a function to send the data a GameMode to make easier gathering this data.

Character(8h): This character use a variation of the character movement class of unreal, this helped with the process of braking and acceleration (changing the ground friction by input, the player will have control of the velocity), also the rotation and movement is based on the skateboard transform matrix.
A function was added to follow the orientation of the floor in ramps and different surfaces, this send a LineTrace from the front and the back of the skateboard to calculate the rotation based on the floor angle.

There is also a function to get sockets location in the skateboard that is send to the AnimBp to joint the player to the skateboard.

GameMode and Instance(3h): These classes helped to get the number of obstacles in the level and triggering the GameOver when the player completed the level or when the timer is over.

The Gameover was created in a separate level to get more control of the display, and for this reason was necessary to use a Gameinstance to pass variables from one level to another.

The gamemode was also in charge of creating a function with a timer that will update in the User Interface.