This game is a simple 3D Skateboarding Game, with a Score System and a Timer.

Most of the movement was implemented inside the SkateboardCharacter, but with proper time and planning, I would have preferred to instead inherit from APawn and create a new MovementComponent, since most of the CharacterMovementComponent functionalities work differently from what I needed.

A small part of the code from SkateboardCharacter was copíed from the ThirdPersonCharacterSample, as well as its input configurations.

To simulate the physics of a skateboard movement, I created an “inertia” functionality, controlled both with player input and according to the slope of the ground, and this inertia was responsible to use AddMovementInput. This worked well with planar ramps with low angles, but caused unexpected results with round ramps and ledges.

The scoring system uses a simple BoxComponent to detect the player and award points during overlaps. I tried to implement more complex tricks to gain points, like rail grinding, but it ended up not working with my physics, so I had to use only jumping over obstacles.

I ended up spending more time than planned trying to fix the animations from Mixamo, due to the lack of a root bone and having too much movement on the feet while riding the skateboard. The best I managed to do was using AdditiveLayerTracks to position the hips and Inverse Kinematics to position the feet of the character on the board.

The level design was inspired by the 2024 SLS Super Crown park, which I had the opportunity to watch live.

Overall, I am somewhat satisfied with the results, but would like to mostly improve the aerial movement and implement tricks beyond jumping over obstacles. The User Interface is very crude

Time Spent:
Character Movement: 12 hours
Animation Adjusting: 4 hours
Level Creation: 2 hours
Scoring System: 1 hour
Game Screens: 1 hour

Total: 20 hours