Coding Challenge 2: VR Level Transformation

Context

The level is currently designed for first-person gameplay, featuring an endlessly generated street where the player can cycle, and an interactive in-game menu with elements such as buttons, collapsible menus, and text fields.

Objective

Convert this first-person level into a fully functional VR experience, preserving as many existing features as possible, while adapting them for VR. Try to follow the requirements below, but you may deviate if you wish. We do not expect you to finish everything, but try to do as much as you can within the time.

Time

2 hours

Deliverable

Prepare a demo of 5 min, emphasising what features you created / modified. Also show what and where you adjusted in the repository.

Requirements

1. **Enable VR Gameplay**
    - The emphasis is on creating an immersive VR experience, so walking in VR is the focal point of this assignment.
    - Implement VR player controls: walking using thumbsticks, teleporting by aiming for the location, looking around.
2. **UI Adaptation**
    - Convert the existing interactive UI elements (buttons, collapsible menus, text fields) to VR-compatible interfaces. Ensure that UI remains usable, accessible, and immersive within the VR environment: clicking on buttons, opening/closing dropdown menus, clicking check boxes, using sliders, using a text box.
3. **Preservation of Original Features**
    - Adapt interactions with the environment to VR: going close to the bike for the biking text prompt to appear, not teleporting / walking inside of a model (create boundaries for the VR player).
    - Preserve as much of the original gameplay as possible, including: modify features only when necessary to ensure a smooth VR experience.
    - **OPTIONAL:** Find a way to detect weather the user uses a VR headset or not. If a VR headset is connected, the conversion from first person to VR should happen. Otherwise, the level can be played in first person as it originally is. This would allow to have one level for both PC package and VR package.