

Title: City Generator – Procedural City Generation and Exploration

Objective: The objective of this project is to develop a dynamic and interactive 3D city generation system using Three.js. The primary focus is to create a procedural city layout that adapts to user-defined parameters, allowing for a unique experience each time the city is generated. The project will include a first-person perspective to navigate through the generated city using Three.js FirstPersonControls.

Features:

1. Procedural City Generation:

- Users will be prompted to define various characteristics of the city before generation, such as:
 - Number of streets and intersections.
 - Presence of terrain elevation (hills and slopes).
 - Number and types of trees to generate, with an optional list of generated species.
 - Toggleable features, such as the presence of parks, water bodies, and pedestrian areas.
- The city will be generated procedurally based on these parameters, ensuring diversity and uniqueness in each iteration.

2. Interactivity and Navigation:

- Navigation through the city will be facilitated via FirstPersonControls, allowing for immersive exploration.
- Streets, sidewalks, and alleys will be accessible, and buildings will vary in height and design.

Future Development (Optional Enhancements):

● Visual and Environmental Effects:

- Lighting effects such as streetlights and dynamic illumination.
- Weather conditions, including rain and fog, which may be toggled or randomized.

● Mini-Game: 'O Segredo da Cidade Perdida':

- A treasure hunt embedded within the city, guiding players to uncover a hidden artifact.
- Clues and fragments of a key to unlock a secret room in the city museum, concluding with a short cutscene.

Conclusion: Initially, the focus will be on procedural generation and interactivity. As the project evolves, additional visual effects and game mechanics may be integrated to enhance immersion and engagement.