**Project Brief**

SETTING: A “Solarpunk” inspired city inside a climate-controlled dome, outside of which is a desolate alien wasteland. Underneath the city are natural crystal caverns.

GAMEPLAY: Racing, with a focus on time trials. The player races around and underneath the city in a hovercar, aiming to beat both their personal records and others’ best times. Passing through rings all the course subtracts time from the overall score but requires greater skill.

**Notes:**

The setting was created to justify design decisions and game mechanics as much as it was to create a sense of place and narrative.

-The climate-controlled dome that surrounds the city both tells the player that the alien world is hostile and gives a solid “in-game” reason for why they can’t go out of bounds and are restricted to only exploring the city and underneath it. It’s a narratively justifiable alternative to the “invisible wall” that serves the same purpose in many games.

-The crystal caverns underneath the city can be used to offer variety, both in aesthetic and gameplay. In contrast to the spacious, tidy city above the crystal caverns can be tight, packed with obstacles and full of twists and turns. They provide a more rigorous test of the player’s skills.

-The Solarpunk theme provides a distinct visual identity and allows me to incorporate natural features like plants and water to use as game mechanics. This may include giant mushrooms that the player can bounce off and waterfalls/hanging vines that obstruct their view.

**This Project Requires:**

-The design and implementation of a procedural city building framework that accommodates a designated “race track” that remains consistent. (An inconsistent race would make comparisons between different times meaningless.)

-The design and implementation of a procedural cave structure framework that results in somewhat natural looking caves and accommodates a designated “race track” that remains consistent.

-The design and implementation of a “race track”.

-Creating a hovercar that is satisfying to control, responsive to the player’s input and fun to race with.

-Creating a scoreboard with race times.

-Creating a timer and creating rings the player can fly through to subtract time from it. (Ensuring the player can only use each ring once per race to stop them abusing the mechanic.)

-Creating interactive obstacles such as giant, bouncy mushrooms.

-The creation of a variety of themed assets, including but not limited to a variety of solarpunk building parts that can be combined in a variety of ways, plants and various cave structures. This includes the creation of suitable materials to apply to objects.

-The sourcing/creation and implementation of appropriate sounds to bring the city to life.

-The implementation of a variety of animations to bring the city to life.

-The design and implementation of Game AI to populate the city with other hovercars and animals.

-Effective use of lighting to create atmosphere and guide the player around the course.