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IGME.202.04

Final Project Documentation:

Press D to toggle path debug lines, and Press F to switch cameras

World Description:

The urban lifestyle, something many of us can relate to. But something here is off. The airplanes are way too low, and performing some strange aerial dance, the orange ones almost always behind the blue one. The butterflies are huge, and the cars are following their commute around the city endlessly.

Steering Behaviors:

Flocking: The butterflies exhibit flocking and wandering, as they move around the parking lot area, avoiding buildings.

Complex Path Following: The cars move about the complex path that is the city block and the parking lot between the building complexes. They have a bit of separation from each other.

Leader Following: The Blue airplane is the leader, and he wanders around the sky, staying in bounds of the scene. The orange airplanes follow him, arriving at a point behind him and avoiding their nearest neighbor.

Character's response to other characters: The butterflies exhibit basic flocking behaviors (Cohering, Avoiding, and Aligning with each other), along with attempting to not collide with the buildings.

The cars stay on their path and try not to run into each other

The airplanes seek a point behind the leader, and slow down once they get closer to that point. They also avoid their nearest neighbor and the leader.

Resources used to guide steering algorithms:

Daniel Shiffman's Nature of Code, the class discussion/powerpoints, and the professor were used to assist in the coding of the steering behaviors.

World Exploration:

Press the "F" Key to move between cameras. The cameras are:

- 1) Front Camera
- 2) Flock Follow Camera
- 3) Long Road Camera
- 4) Top Down Camera

5) Back Camera

Other Notes:

Sometimes the airplanes will collide. This is because they are fairly large and only avoid their nearest neighbor.

Assets:

Car - <https://www.assetstore.unity3d.com/en/#!/content/38743>

Airplane - <https://www.assetstore.unity3d.com/en/#!/content/4310>

Butterfly - <https://www.assetstore.unity3d.com/en/#!/content/20985>

Buildings - <https://www.assetstore.unity3d.com/en/#!/content/33563>

Road - <http://www.textures.com/download/3dscans0022/126610?q=road>

Sidewalk - <http://www.textures.com/download/3dscans0004/125602?q=sidewalk>