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**IGME 202 Section 4**

**Final Project Documentation**

**Description of World:**

My world is a zoo surround in the mountain side with trees. Many Robots are visiting the zoo and looking at the Lions, Gorillas, Falcons, and the elusive Toad Monsters. Two lead Lions and a lead Gorilla wander around in their habitats with fellow lions and gorillas following behind them. While the glorious falcons flock around in their peaceful habitat. The Toad Monsters are practicing the Marching with their lead Toad in front and other toad monsters from two line behind him. In the food court area you can see many robots in line to get food from the farmer.

**Steering Behaviors:**

**Flock implementation: The Falcons are the flockers and they use alignment, cohesion, and separation.**

**Steering Behaviors: wandering is used by the lead gorillas and lead lions, seeking is used by the wanderers, arrival is used in leader following and path following and is used by the robots, follower lions/gorillas, and the Toads. Also evade is used by the wanders, leader followers, and is used by the lions, robots, gorillas; and the advanced behaviors are used.**

**Advanced Steering Behavior 1:** Leader Following

Leader following does what it is supposed to do. Robot followers, Toad Monsters followers, Lion followers, and gorilla followers arrive at a point at the correct distance behind their leader. Each of the follower in their pack maintain a separation distance from the other followers in the pack. If they get in the leaders way when the leader turns around they will evade the leader and continue following. They will evade to the best of their ability from other robots, lions, toads, and gorillas that get in their way.

**Advanced Steering Behavior 2:** Simple Path Following

Simple Path following works as it should. It is used by lead robots and the lead Toad monster. When the path follower approaches the current point and gets within a certain distance of the point. The Path follower will call Arrive for the next point and this works very well.

Leader Following works well, but there are some cases where a follower will get stuck on a fence or something and then eventually get unstuck. The follower will then eventually catch up with the leader.

**Characters’ response to other characters:**

The two lion prides will do their best to evade each other. The Robots will evade other moving robots, but ignore the non-moving robots. The toad monsters will evade each other if they accidentally get in each other’s way. The gorilla followers will evade the lead gorilla if they get in his way.

**Characters’ response to the environment:**

All character ignore fences, lamp posts, benches, phone booth and stone walls. Gorillas evade trees in their habitat, and Falcons will avoid trees in their habitat. The reason for this is that I found that getting every character to avoid these obstacles caused more problems than it solved. Also the characters pretty much avoid them on their own, and it helps to not slow down frame rate with pointless checks.

**Other notes:**

Pressing the ‘C’ key will switch between different camera views. These cameras are:

* Flocker Camera: follows the flock up close and from the center of the flock.
* Lion Camera: follows one of the pride’s lead lions up close.
* Toad Camera: Gives an overview of the Toad monsters practicing their marching.
* Gorilla Camera: Gives an overview of the Gorilla group wandering and following.
* FPS Camera: Gives control of a first person controller with which to explore the environment.
* Overview 1 Camera: gives an overhead shot of the first half of the zoo.
* Overview 2 Camera: gives an overhead shot of the second half of the zoo.
* Lion Overview Camera: gives an overview of the lion habitat.
* Falcon Overview Camera: gives an overview of the Falcon habitat.

Habitats and Park Descriptions:

Lion Habitat – Has two prides of lions, each pride has 1 wandering lion and 2 follower lions

Toad Habitat – has 1 path following toad monster, and then two columns of toads following each other behind him.

Falcons Habitat – have several falcons flocking.

Gorilla habitat – has 1 wandering gorilla and 3 follower gorillas

Park – each habitat path has a group of 1 path following robot and some follower robots. Main Park path has 1 path following robot and 3 follower robots.

Flockers have their own scripts so that I could edit the other scripts without possibly affecting them.

**Resources:**

**Asset List:**

* The Lion - made by CrossRoad\_kimys2848 assets package Name: Lion V 1.2
* The Gorilla – made by Reallusion assets package Name: Gorilla Character,
* The Toad Monster Creatures- made by CrossRoad\_kimys2848 asset package name: Toad Monster V 2.0
* The Farmer Npc - made by CrossRoad\_kimys2848 asset package name: Micro Farmer NPC
* The Falcon- made by CrossRoad\_kimys2848 asset package name: Falcon
* The lamppost, Phone booth, bench and fire hydrant – made by nolgraphic asset package name: London Street Assets,
* The two wooden Fences – made by unity Technologies asset package: Shanty Town: Town Fence
* The umbrella table and chairs – made by Game Ready asset package name: Street Table,
* The tall chain linked Fence – made by Unity Technologies asset package name: Shanty Town: Tall Fence
* The palm tree, broadleaf tree Desktop, broadleaf tree mobile made by Unity asset package Environment
* Swamp, grass and sand Texture- made Unity asset package: Environment
* Cobblestone texture – got from google images credit: (<http://pegitboard.com/show-image/?img=/pics/t/35935.jpg>
* The dirt texture – credit: (<http://www.bianoti.com/gallery-darksoiltexture.html>
* Robot – made by myself
* Savannah trees –made by Unity Technologies asset package: Shanty Town: Trees
* Stonewalls – made by bitsong asset package: Dry Stone Wall With Leafy Vines
* Skybox – made by 70:30 asset Package: Cope! Free Skybox Pack
* Lion habitat ground – made by FR3D asset Package: Rock Pack
* Gorilla jungle ground texture – credit: <http://jkunzart.com/galleries/texture-art/>

Camera Manager coded based off of example code provided by Darren Farr in the Unity Discussion on MyCourses.