Random Animal Stampeed

1. Create a spawn manager

- In the Hierarchy, create an **Empty object** called “SpawnManager”
- Create a new script called “SpawnManager”, attach it to the **Spawn Manager**, and open it
- Declare new ***public GameObject[ ] animalPrefabs;***
- In the Inspector, change the **Array size** to match your animal count, then **assign** your animals by **dragging** them from the Project window into the empty slots **Note:** Make sure you drag them from the **Project** window; not the Hierarchy! If you're going to spawn objects, you need to make sure you're using Prefabs, which are stored in the Project window.

2. Spawn an animal if S is pressed

- In ***Update()***, write an if-then statement to **instantiate** a new animal prefab at the top of the screen if **S** is pressed
- Declare a new ***public int animalIndex*** and incorporate it in the **Instantiate** call, then test editing the value in the Inspector

3. Spawn random animals from an array

- In the if-statement checking if S is pressed, generate a random ***int animalIndex*** between 0 and the length of the array
- Remove the global ***animalIndex*** variable, since it is only needed locally in the **if-statement**

4. Randomize the spawn location

- **Replace** the X value for the Vector3 with ***Random.Range(-20, 20)***, then test
- Within the **if-statement**, make a new local ***Vector3 spawnPos*** variable
- At the top of the class, create ***private float*** variables for ***spawnRangeX*** and ***spawnPosZ***

5. Change the perspective of the camera

- Toggle between **Perspective** and **Isometric** view in the Scene view to appreciate the difference
- Select the **camera** and change the **Projection** from “Perspective” to “Orthographic”

6. Lesson Recap

New Functionality

- ◦ The player can press the S to spawn an animal
  ◦ Animal selection and spawn location are randomized
  ◦ Camera projection (perspective/orthographic) selected

New Concepts & Skills

  ◦ Spawn Manager
  ◦ Arrays
  ◦ Keycodes
  ◦ Random generation
  ◦ Local vs Global variables
  ◦ Perspective vs Isometric projections

Next Lesson

- Using collisions to feed our animals!

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