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HW 4

CSC 3150

Homework 4

5) Explain the following in a few sentences and give an example in your own words (or research the internet to find one. If researched, please cite your source): [2 pts each]

1. World coordinate system
   1. A world Coordinate System that defines the positions and orientations of the GameObjects in the entire scene. It is used for positioning,scaling, and rotating GameObjects within the overall scene. An example of this would be the world that you load into in Minecraft that has set coordinates across the open world for all GameObjects.
2. Local coordinate system
   1. A local coordinate system is relative to a GameObject’s own transform that is centered at the GameObject’s local origin. An example of this would be a coordinate system with the player as the center rather than the world.
3. Vector3. Also, explain any two vectors in Unity of your choice.
   1. Vector3 is used to manipulate positions and directions in Unity. An example of this is the rotation of a players with their mouse in a game to turn the direction of the player camera. Two vectors in Unity are Vector3.up and Vector3.down. Vector3.up is used to move GameObjects up the y axis while Vector3.down is used to move GameObjects down the y axis.
4. Rigidbody.AddRelativeForce function
   1. Rigidbody.AddRelativeForce method applies a relative force on something with rigidbody relative to its local coordinate system. This method is used to move objects relative to their orientation. An example of this would be a player using W key then Rigidbody.AddRelativeForce would move the player forward along its local coordinate system.
5. Input.GetKey function
   1. Input.GetKey method is used to bind a key to an input that is recorded by Unity. This is used to receive key presses by the game and turn it into game actions. An example of this is games using the E key as an interact key, recording the player pressing E to interact would be using the Inout.GetKey function.