HTC Vive VR Workshop

CONTROLLER SCRIPTING 02/06

06 FEBRUARY 2018 / 5:30 PM / Makerspace / Instructor: Bijan Samiee

LESSON NOTES

Creating a New Project

1. Press ‘New’ in project menu
    a. Or File>New Project…
2. Import SteamVR asset from Asset Store. (search SteamVR in asset store)
3. Create [CameraRig] object in scene, and then add ‘Plane’ 3D object as floor.

Scripting

- Create new C# script on controller object.
- Declare and initialize controller & button variables (Class Variables):

```
private Valve.VR.EVRButtonId gripButton = Valve.VR.EVRButtonId.k_EButton_Grip;
public bool gripButtonDown = false;
public bool gripButtonUp = false;
public bool gripButtonPressed = false;


private Valve.VR.EVRButtonId triggerButton = Valve.VR.EVRButtonId.k_EButton_SteamVR_Trigger;
public bool triggerButtonDown = false;
public bool triggerButtonUp = false;
public bool triggerButtonPressed = false;

private SteamVR_Controller.Device controller { get { return SteamVR_Controller.Input ((int)trackedObj.index); } }

private SteamVR_TrackedObject trackedObj;
```

- Add button boolean update commands:

```
gripButtonDown = controller.GetPressDown (gripButton);
gripButtonUp = controller.GetPressUp (gripButton);
gripButtonPressed = controller.GetPress (gripButton);

triggerButtonDown = controller.GetPressDown (triggerButton);
triggerButtonUp = controller.GetPressUp (triggerButton);
triggerButtonPressed = controller.GetPress (triggerButton);
```

NOTES

- **Haptic Feedback:** Used to create controller vibrations. Implemented with:
    - *controller.TriggerHapticPulse (3000); //in microseconds*
- **Debug Command:** Assists with game development
    - *Debug.Log ("Your hint!"); //Only shows up in console*
- **Initialize 'trackedObj' variable:**
    - *trackedObj = GetComponent<SteamVR_TrackedObject> (); //put in Start() method*

RECOMMENDED RESOURCES

- **Basic Unity Tutorial:** (Google: Unity Roll a Ball) https://unity3d.com/learn/tutorials/s/roll-ball-tutorial
- **Game Dev Tutorials (more complex):** (Google: Brackeys) https://www.youtube.com/user/Brackeys
- **Free Assets (from tutorials):** http://brackeys.com/
- **VR Interactions Tutorial (basically this lesson):** https://www.youtube.com/watch?v=h9IJHZgkcME
- **Different VR Interactions Tutorial:** https://www.youtube.com/watch?v=nYcS9_OTb-w