
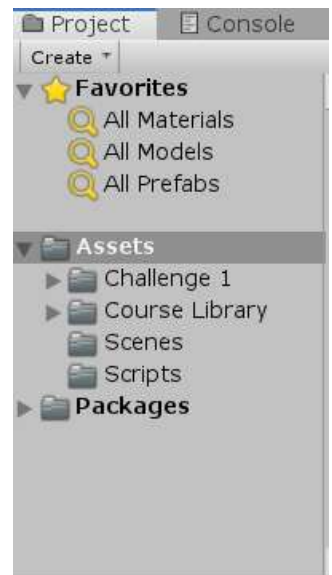


CORNELL NOTES – COMPUTER PROGRAMMING & GAME DESIGN I

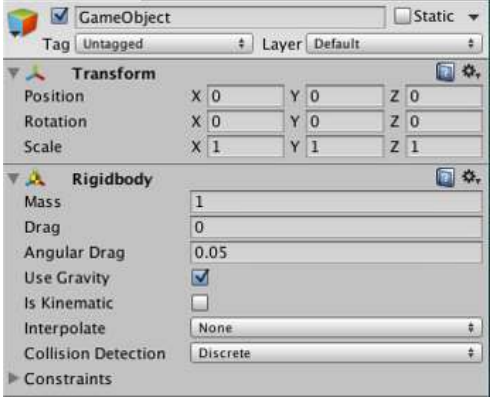
	Topic/Objective: Level 7: Player Control	Name:
		Class/Period:
		Date:

Level Objective:
To review how to use the Unity Editor, work with C# Scripts, and work with simple programming. Also to introduce rigidbodies in adding gravity to our GameObjects.

Questions:	Notes/Answers/Definitions/Examples/Sentences:
	<p>Reminders with your Unity Layout</p> <ul style="list-style-type: none"> • <u>Hierarchy Window</u> – shows a list of all your GameObjects currently in your scene • <u>Project Window</u> – contains all files in your project • <u>Inspector Window</u> – lists all components of the current gameobject selected <p>Commands You Should Know About</p> <ul style="list-style-type: none"> • <u>Importing Package</u> – Assets > Import Package > Custom Package • <u>Playing/Stopping Your Game</u> – CONTROL + P • <u>Duplicate GameObjects</u> – CONTROL + D <p>Navigating In Scene View</p> <ul style="list-style-type: none"> • Mouse Wheel – Zoom In and Out • Hold Down Middle Mouse Button – Pan Your Screen • Hold Down Right Mouse Button – Rotate View from that Point • "F" Key or Double Click on GameObject in Hierarchy – Focuses Just On That GameObject <p>Don't Forget...</p> <ul style="list-style-type: none"> • All files you need to add to your game must be kept inside the Assets folder of your project for that game • When naming your files, always capitalize the beginning of each word as well as do not have any spaces in between words (Ex. PlayerController) • Components are nothing more than behaviors for your GameObjects • Write a comment that could be written into your code: //Comment Goes Here • Your Script File Name must be the same as the filename shown towards the top of your script



CORNELL NOTES – COMPUTER PROGRAMMING & GAME DESIGN I

Questions:	Notes/Answers/Definitions/Examples/Sentences:														
	<p><u>What Does That Code Mean?</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">Update ()</td> <td style="padding: 5px;"><u>Method that's used to update your game every frame per second</u></td> </tr> <tr> <td style="padding: 5px;">transform.Translate</td> <td style="padding: 5px;"><u>Used to move a GameObject in a certain direction</u></td> </tr> <tr> <td style="padding: 5px;">transform.Rotate</td> <td style="padding: 5px;"><u>Used to rotate a GameObject in a certain direction</u></td> </tr> <tr> <td style="padding: 5px;">Vector3</td> <td style="padding: 5px;"><u>Representation of 3D vectors and points with the three different axis (X, Y, Z)</u></td> </tr> <tr> <td style="padding: 5px;">Time.deltaTime</td> <td style="padding: 5px;"><u>To make it where we know when one second of time has elapsed (versus just frames passing)</u></td> </tr> <tr> <td style="padding: 5px;">public</td> <td style="padding: 5px;"><u>We can see the variable in Inspector</u></td> </tr> <tr> <td style="padding: 5px;">private</td> <td style="padding: 5px;"><u>We can see the variable only in the script</u></td> </tr> </table> <p><u>Rigidbody</u></p> <ul style="list-style-type: none"> • Definition – <u>enables GameObjects to act under the control of physics</u> • With this component, a GameObject will automatically respond to <u>gravity</u> • Allows your objects to move in a <u>realistic way</u> • To control your Rigidbody, you will use <u>scripts</u> to add force • Bottom line: <u>If you want your GameObject to have any sort of movement in the game, it should be converted to a Rigidbody</u> <div style="border: 1px solid gray; padding: 5px; width: fit-content; margin-top: 10px;">  <p>The screenshot shows the Unity Inspector for a GameObject with a Rigidbody component. The Transform component is expanded, showing Position (X: 0, Y: 0, Z: 0), Rotation (X: 0, Y: 0, Z: 0), and Scale (X: 1, Y: 1, Z: 1). The Rigidbody component is also expanded, showing Mass (1), Drag (0), Angular Drag (0.05), Use Gravity (checked), Is Kinematic (unchecked), Interpolate (None), and Collision Detection (Discrete). The Constraints section is collapsed.</p> </div>	Update ()	<u>Method that's used to update your game every frame per second</u>	transform.Translate	<u>Used to move a GameObject in a certain direction</u>	transform.Rotate	<u>Used to rotate a GameObject in a certain direction</u>	Vector3	<u>Representation of 3D vectors and points with the three different axis (X, Y, Z)</u>	Time.deltaTime	<u>To make it where we know when one second of time has elapsed (versus just frames passing)</u>	public	<u>We can see the variable in Inspector</u>	private	<u>We can see the variable only in the script</u>
Update ()	<u>Method that's used to update your game every frame per second</u>														
transform.Translate	<u>Used to move a GameObject in a certain direction</u>														
transform.Rotate	<u>Used to rotate a GameObject in a certain direction</u>														
Vector3	<u>Representation of 3D vectors and points with the three different axis (X, Y, Z)</u>														
Time.deltaTime	<u>To make it where we know when one second of time has elapsed (versus just frames passing)</u>														
public	<u>We can see the variable in Inspector</u>														
private	<u>We can see the variable only in the script</u>														

