**Physics World – Part III**

An experimental 2-dimensional, physics-heavy, sandbox-game-thing.

**Submission Guidelines:**

In GitHub, create a branch for your project named “Part3\_Completed”.

Due at the start of our next class meeting

**Base Requirements (83)**

* In GitHub, create a branch for your project named “Part3\_Completed”.
* Place an annotated version of this rubric in the root directory of your Unity project. Save it in Word .docx format. When I download your Part3\_Completed branch, I should find the rubric.
* Build a fully working SquishyBox, and place it in your game scene:
* It should have four physics-based game objects as the corners, and a SpriteShape with a SpriteShapeVertexMatcher script.
* Explain: In your scene, where is your SquishyBox?
* It was on the biggest wave platform, it will fall from above and the player can jump on it.
* Build simple thing that makes use of physics, springs, and FrontBackFriction. If you like, you could make a blade of grass. If you would like to build something else, that’s fine too.
* Explain: What did you build? What does it do?
* I built coral leaves that swings as the player travel through them.

**Stretch Goals:**

* (+3) Prepare for, and participate in next Wednesday’s Show ‘n Tell.
* Before 5PM PST next Wednesday, send me an email with one image from your project. You can send still image of a game scene, an image of a piece of code, or an animated gif showing moving things. Your choice. You pick what you want to share.
* Be prepared to say 2-3 sentences about your image in our next class meeting.
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* (+1 to +5) Add detailed comments to the SpriteShapeVertexMatcher script, explaining how it works:
* Use medium detail. If I were to hold on to your code and show it to Game Dev 1 students next spring, those people should be able to read your code and understand the ideas behind the code.
* If you chose to do this, write ‘yes’ here: yes
* (+1 to +5) Add detailed comments to the FrontBackFriction script, explaining how it works:
* Use medium detail. If I were to hold on to your code and show it to Game Dev 1 students next spring, those people should be able to read your code and understand the ideas behind the code.
* If you chose to do this, write ‘yes’ here: yes
* (+8 to + 20) Build another solid, spring-based object, using the same ideas as in the Squishy Box. You could make a tree, a bridge, a fancy box, or something else. Whatever you like. Whatever you think would fit well with the premise of your project.
* The object should do physics-based stretch and squash.
* The object should be rendered with a SpriteShape and a SpriteShapeVertexMatcher.
* Explain: What did you make?
* Explain: When and how does it stretch and squash?
* Explain: Where is this thing in your scene?
* (+8 to +20) Build another physics-based object that uses FrontBackFriction. Something at least a little different from whatever you built for the Base Requirements.
* The object should do physics-based stretch and squash ... when things move past / through it.
* Explain: What did you make?
* Explain: When and how does it stretch and squash?
* Explain: Where is this thing in your scene?
* (+8 to +20) Create a new PatternMaker component that takes a SpriteShape Component, and procedurally sets the vertices of that SpriteShape to create some sort of pattern.
* Explain: What pattern does this script make?
* Explain: Where is this thing in your scene?
* (+1 to +20) Other. Something related to this week’s topics: springs, spring networks, sprite shapes, controlling sprite shapes via code, front/back friction, etc.
* Explain: What is your nifty thing?
* Explain: Where have you used this thing in your project?