CSS551 Fall 2022 Final Project
Punching & Stress Relieving Game

Team Members:
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Project Explanation:
This is a punching game which allows the user to play on their mobile devices to release their stress from work and life. Users can choose to punch in the wall or the sandbag in the scene. Users have control of their punching direction by swiping the screen and punching power by controlling the pressing time on the screen. Users can also move the whole hierarchy from one position to another.

Tasks and Schedule
(3 weeks and 1 day before final presentation - 11/26 starts)

Tasks/Requirements	How technical requirements are met	Timeline (Due date)

UI Setup	1. Start scene
	2. Main scene (gameplay scene)
	   a. Rest
	   b. Quit
	   c. Strength bar
	   d. Controller
		Nov. 26

Object interaction	1. Wall 2. Ball 3. Sandbag	Nov. 27
Camera manipulation	Camera1: tumble (gyroscope), zoom in/out (touch input)	Nov. 28
SceneNode hierarchy + 3 generations	1. Arm 2. Front arm 3. Fist	Nov. 28
Illumination and texture	Shade Arm + front arm + fist with diffuse illumination shader	Nov. 30
Two different views	1. One camera always looks at the hand 2. One can be attached on the hand and always looks at the up direction of the fist	Dec. 5
Tech investigation 1	Display platform + Controller	N/A

(Gyroscope + Touch Input from Mobile Devices)		
Tech investigation 2 (Multi pass shader)	1. Outlining Objects (walls + balls + sandbags) - combined with the Hatch Shader 2. XRay effect (when fist not breaking walls)	1. Dec. 1 2. Dec. 3
Tech investigation 3 (Hatch Shader)	1. Shade Objects (walls + balls + sandbags) - combined with the Multi Pass Shader	1. Dec.1
3 person team: Additional Shader	Create a glowing effect shader on the hand. Glow more when strength is up.	Pending
Direct manipulation	1. Use Touch Input to control fist movement direction and the whole arm rotation 2. Use press time to control the force	Dec. 10

Application Design and UI:

Main Scene: