Washington State University
School of Electrical Engineering and Computer Science
Spring 2017

CptS 479 Mobile Application Development in iOS
Homework 12
Due: April 18, 2017 (11:59pm)

General Instructions: Put the entire app directory into one zip file and submit as an attachment under Content → Homework 12 for this course on the Blackboard Learn system by the above deadline. Note that you may submit multiple times, but only the most recent entry submitted before the above deadline will be graded.

For this homework we will add sounds to the Bounce game developed in HW11. First, we will add sound effects for when two balls collide and when the red ball bounces off a wall. Second, we will add some background music. And third, we will add a settings page that allows the user to turn on/off the sound effects and/or the background music. See the screen shots below. Specifically,

1. Download the following sound files and settings gear image, and add them to your project.
    a. http://www.eecs.wsu.edu/~holder/courses/MAD/hw12/bounce.mp3
    b. http://www.eecs.wsu.edu/~holder/courses/MAD/hw12/glassbreak.mp3
    c. http://www.eecs.wsu.edu/~holder/courses/MAD/hw12/WSU-Fight-Song.mp3
    d. http://www.eecs.wsu.edu/~holder/courses/MAD/hw12/settings.png
2. Create SpriteKit actions for the bounce and glassbreak sound effects. When the red ball contacts the wall, the app should run the bounce action. When the red ball contacts a green ball, the app should run the glassbreak action. This should be conditioned on whether or not sound effects are enabled.
3. Create an audio player to play the WSU-Fight-Song continuously in the background while the game is not paused and background music is enabled.
4. Add a new settings view and view controller class to your project. The settings view should say "Settings" at the top and have two switches, one for sound effects and one for background music. Add a "Done" button underneath the switches. Create a segue from the game view to the settings view, and create an unwind segue from the settings back to the game.
5. The two settings should be maintained in the UserDefaults so that they persist even when leaving and re-entering the app. On the first run of the app, both settings should be on. Changes to the settings should have an immediate effect. For example, if the game is running, the background music is playing, the user taps the settings gear to view the settings, and then turns off background music, then the music should stop immediately, even before the user taps the Done button. If the game is paused, then the background music should not play, regardless of changes to the background music setting. The same rules apply to the sound effects setting.

6. Move the Start/Stop sprite to the bottom-left corner of the scene and add another sprite node to the bottom-right corner whose texture is the settings.png image.
7. When the user taps the settings gear sprite node, the app should segue to the settings view. When the user taps the Done button on the settings view, the app should perform the unwind segue back to the game.
8. You may assume the device will remain in the portrait orientation.

Screenshots: