**Lab 6 Observations**

**Chapter 9, Question 1**

This question asked me to comment out the assignment to this.easingFunction in the AnimationTimer constructor and observe what happens when the runner jumps. This completely removes the ability to provide an easing function to any animation timer, which results in all animation timers being linear. The goal of the easing function is to manipulate the time that has passed to give animated objects non-linear animations. Without one, everything is linear. Indeed, applying this change reflects that, and everything that once had a non-linear animation now has a linear one. They do still function properly, just without the non-linear animations.

**Chapter 9, Question 2**

This question asked me to change the ease-out-in function used by the bounce behavior to an ease-in-out function. For the bounce behavior, the ease-out-in function will ease the animation out once the object approaches the peak of its bounce and then ease it in as it starts falling. Changing the function to an ease-in-out function will do the opposite. The ease-in-out function will ease the animation out as the object reaches the ground and then ease the animation in once it hits the ground and starts moving back up. We make this change in the bounce.js script (I copied it to modifiedBounce.js so that future scripts won’t be impacted) by changing the ease function. When applied, the objects look like they’re bouncing off an invisible ceiling rather than the floor.

**Chapter 10, Question 1**

This question asked me to modify the keydown event handler to run the game in slow motion using the setTimeRate() method when the “s” key is pressed. If the game is already running in slow motion, set it back to normal. For my purposes, I am defining slow motion as the game running at 0.25x speed. This is achieved by scrolling down to the window.onkeydown handler in the JS file and adding a new else-if statement for keyCode 83 (which is the “s” key). From there, we simply check if the current time rate is 1.0 and, if so, slow the game down to 0.25x speed. Otherwise, we set the game back to 1.0x speed. For some reason, the game started at a time rate of 0.1. I removed that code so that the game would start at 1.0x speed. With those changes, you can now press “s” to slow down or speed up the game.