1. Since the Garlic and ExtraLife goodie had repeating behavior, I created a common behavior in the Goodie class. I created a member function called playerIsOn() in the Actor class that uses a StudentWorld’s member function called playerPosition() to determine the current position of the player and compares that value with the object that calls the function. If the player and Goodie does not coexist on the same location, I set the current object to dead using a setDead() member function in the Actor class, play a sound using the playSound() function from the GameWorld class and call the Goodie-specific behavior using a function called doGoodiesSomething(). For the ExtraLife goodie, I incremented the score and the lives by using the increaseScore() and incLives() functions from the GameWorld class. For the GarlicGoodies class, I used increaseScore() to increase its respective amount, and called a function addBurps() I created in the StudentWorld class which increases the Player’s member variable that keeps track of the burps. I had to declare this function in the StudentWorld class because this is the only class that has access to all the players in the game.

2.

1. When the player is on a ladder but cannot move anymore higher because of a floor blocking its path, the player isn’t able to jump but still plays the jump sound.

3.

1. I didn’t know whether I should play the jump sound during its first tick, or when the jump() function itself was called so I implemented it on its first tick.
2. Once Kong flees, it wasn’t specified whether the game should end as soon as Kong reaches the end of the screen or whether it should end 5 ticks after Kong reaches the end of the screen. The demo version had a 5 tick delay, so I followed that example.
3. It did not specify which actor should perform their move first, since I created my player as a separate pointer and not within the actor container. I called the doSomething() on my player first before all the other actors.
4. The spec doesn’t specify whether the barrel should change direction as soon as it falls one square down, or if it’s ok to change its direction once it reaches a floor. Since the barrel’s direction is an internal state, it was hard to determine from the demo. I made it switch direction once it reached the floor.