**Singleton:**

Made a static instance of class GameManager and made a property that returned that instance and instantiated it if it wasn’t already instantiated.

**FSM:**

Made Class State Machine which can hold a list of states, and transition from state to state using only that list, if and only if the states are linear. Also has a protected data member for the current state. Made abstract class State that has a list of states that it can transition to, as well as check for a valid transition, which will return the state that the FSM needs to transition to should the correct conditions be met. CheckTransition() MUST be overridden. Class State also has a function OnUpdate() that can and should be overridden should the class inheriting class State need to have a method called every frame.

All states should inherit from Class State. The generic State Machine class should be inherited by any class should you have any specific use for the State Machine, even though it is not “Generic.” In general, it makes more sense to inherit from class State Machine as opposed to adding stuff to the class every time you want to use it.

**Messenger:**

Also implemented as a singleton. My Messenger implementation has a dictionary that maps messages to Actions, as well as another dictionary that maps messages to GameObjects. The messenger can Add a listener to a message, and as well as broadcast a message to all listeners.

**RUBE GOLDBERG DEMO:**

Stage 1: The User presses “SPACE BAR” and the demo starts with awesome ass music :)

Stage 2: The blocker thing moves up and hits a trigger and the Ball gains a Rigid Body, thus causing it to roll down the ramp and into the box.

Stage 3: When the ball lands in the box, that box, as well as the box next to it, closes and starts to move down, while box 2 moves up.

Stage 4: When the Box gets to a certain point and calls OnTriggerEnter(), the two boxes open up and the ball starts to roll out of the second box. WOAH! MAGIC DUDE!

Stage 6: The ball hits a trigger to change the camera view, and rolls down a ramp to the ROLLER COASTER RAILS!

Stage 7: I skipped stage 5 :3

Stage 8: The ball hits yet ANOTHER trigger to change the camera view. The ball rolls down the railings very slow and dramatically… And eventually hits another trigger to change the camera view again!

Stage 8: The Ball hits a domino and causes a domino effect. The dominos turn black as they get hit. No I am not racist.

Stage 9: The last domino falls and hits a button and we LIGHT UP THE WORLD BABY! ;)