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Homework 4

Design Rationale

Overall, I felt comfortable with my design. From the beginning, I understood which functionality had to be implemented and in which classes I should do so. I liked separating the program into manageable components, namely the map, ship, pirates, and main class to run the program. Following the Cat and Mouse code example made implementing the Observer/Observable methods to my Ship and Pirate easier as well. One thing I disliked about my design was the creation of the two pirate ships. Given that their methods and functionality were the same, small portions of my OceanExplorer class were copy/pasted lines to duplicate the ships. If more than two ships were to be created, I would have liked to use a loop to create each ship one at a time without any repeated code. Given that there are only two ships, creating them manually was easy enough to keep track of.

In order to extend my design to support the stretch functionality, I don't think too many things would have to change. I already implemented one stretch function to add island images to the map, so the other functionality to include would be the 'reset' button. I don't think this would be difficult to implement; I would place a button somewhere on the stage and relaunch the 'start' method from OceanExplorer each time the button is pressed. This would again randomize ship, pirate, and island locations. Very little, if any, logic would have to change. Random locations would still be determined the same way, and image placement would not change either.