## Chip's Challenge Discussion Michael Havighorst

For Chip's challenge, I used three strategies that came to mind right as I began to plan my project. I knew that I wanted to add in a bug to one of the levels, so I used the Observer pattern. I wanted the bug to move based off of Chip's movements, so I used the observer pattern like in the Christopher Columbus assignment. The pirate ships chased Columbus's ship, so I used a similar implementation for the bug. I knew the game would only need one game board, so that led me to using the Singleton strategy. Finally, for the doors and keys, since the only properties that really changed were the colors, the Strategy pattern came straight to mind. If I could restart the project, I would definitely plan the levels of the game much more specifically before I began the project. When completing Chip's Challenge, my first goal was to design for every element of the game to work, and then create my levels. I did not specifically plan the layout of each level early on, and I believe if I had done this, I could have had a much more interesting project.