

# CS396 Software Design Principles and Practices

## **Project: Option 3**

**Trenton Kim**

### **List of Changes Made to Design with Analysis**

1. I added a CardPlayStrategy interface that defines execution results for all card effects depending on the card played. I made this change to take advantage of the Strategy pattern, allowing for a separation of logic between card behavior and the overarching Game as a whole. This keeps functionality intact while creating more flexible code that better handles any card behaviors being modified, removed, or added.
2. I also added a CardStrategyFactory class that returns the correct strategy for a given card. This was done to streamline the code while implementing the Factory pattern, as now the Game class does not need to specifically address the results of playing a specific card. Instead, all cards will be supported, and only a single standardized method will be used. This improves the flexibility of the program.
3. In a similar note to the second change, I replaced the card-specific methods in GameUI with playCard, with the idea of having playCard handle all of the cards and then choosing the proper behavior. This works to improve the program's flexibility and improve code readability.