## 1. Which materials/key concepts from this course did you apply on the project?

Key concepts of this project include: the MVC, Strategy patterns, ActionListeners, and data manipulation. The strategy pattern was used to implement two different styles of boards for this project. The whole project was implemented according to the MVC pattern where the Controller updated the model and the model notified all the views. The inputs taken from the user were used by the controller to update the model and then the model notified the views which were then displayed to the user. This course also taught us the importance of designing before implementing the actual code. If the majority of the time is spent on designing then the implementation of the code becomes relatively easy. So we applied this concept on our project and thus we spent 1.5 weeks on the designing part. First we implemented the use cases, then we identified different classes and finally implemented the class and the sequence diagram. Then we spent the rest of our time implementing and testing the code. This was a key concept that we learned from the course and implemented on our project. Material wise, IDE's and source control were very beneficial as well as java application software associated with our computers. Using GitHub was helpful in being able to share code in a more accessible manner and add on to it. The IDE's were useful environments to build the code in, for testing and updating. The concepts were helpful in building the infrastructure of the entirety of the project, like knowing what relates to which class and how it manipulates the data.

## 2. Which topics did you have to learn through self-study in order to complete the project?

Topics needed to learn through self-study were more examples of strategy patterns being implemented as well as a better understanding of Java GUI. In relation to its graphical user interface, having a better understanding of its components and behaviors made

creating an actual Java GUI based application easier. Furthermore, it helped in completing the project because it made combining the two as an implementation possible.