

Questions and Answers

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

This class covered a lot of helpful coursework and is merely a pathway into a particularly extensive arena of the software industry, namely the Object-Oriented-Design and Programming. This is a very challenging programming course, which delivers an invaluable foundation for seeking the aforementioned subject in the future. Amidst the seminars, the virtual video lectures, and the textbook, there is a bundle of learning to consume and assimilate; the more time you spend on it, the deeper you will uncover.

These were the concepts we used for this project. -

- a. The main key concept we implemented in this project was the pattern concept. We used the MVC Pattern or Model/View/Controller architecture. The MVC Pattern is an example of the Observer Pattern. The Model class helps us achieve the functionality of the code. The View class helps provide the GUI for the project. And the Controller class helps update the state of the other two classes. We also used the Strategy Pattern. This helped choose the different styles for our board. We use a strategy interface and the concrete classes are able to implement this into it's algorithm.
- b. We also used some core concepts and ideas that we learned from the beginning of the semester, and they were the object oriented design process. We learned how to design our code to help make our implementation process more efficient. For this project we drew out our class diagram, sequence diagram and use cases.
- c. We also used interfaces, another key concept we learned. This was used for the implementation of our Strategy Pattern.
- d. Just like the interfaces, this comes under the MVC Pattern. We also learned a lot about GUI components and how to implement it in our code. We had many labs that involved this and it helped us prepare for this project's implementation.

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

We had to get a better understanding of the action listeners and buttons in order to make a working undo button and disable the buttons upon completion of the game. Saving the state of the game was a bit difficult at first, but we eventually found an article about the command pattern. However, we decided against saving the board object itself and just saving the moves made in variables. If the values of those variables were equal to an integer, it would mean the undo button is clickable and we can enable the button. We also had to study the strategy pattern a bit more in order to understand how it truly worked.

The example the notes used with the invoice was a bit confusing so after reading up on it online, we were able to get a better understanding of how to format it.