Project 3 Design Patterns

One of the design patterns we used in project 3 was a bridge. A bridge splits the abstraction and the implementation for a class or a few closely related classes. In project 3, our design is a game-box that has multiple games to play, like connect4, cards, and snake. An example of how we used a bridge was having an interface for a certain game and we had underlying code on what should happen if the user types a certain thing into the interface. The interface delegates the work to the underlying code classes. The interface is the abstraction part of the bridge design, and the underlying code is the implementation. A specific example of this in our project is having a connect4 board class that focused on the design of the board, while the main connect4 class focused on the functionality of our game. This design pattern made it easy to focus on individual parts of code at once. Another design pattern used was a composite. We broke our idea of a game-box down into different games and game modes, and it all starts from an initial game-box screen. The main game-box is broken down into separate games (connect4, cards, snake, etc.), then those games are broken up further into game modes, game logic, etc. The trunk of the tree of our composite is the game-box idea, and the leaves and branches are the games and further functionality of those games. This hierarchy design of our code helped create easier understanding of what specific code does what.