

Software design patterns are reusable solutions that have been seen many times. These patterns are common and have solutions that can be written step by step to resolve. Sometimes though, the problem could be one that while it is recurring can have more than one way to complete. That is, these problem solving techniques can be useful for solving more than just software issues because once you practice these methods over and over your way of thinking about these situations alter. One pattern that we used in our project 3, is facade which goes under the GoF structural category. Facade is use to simplify the framework or improve understanding of the software library. In our program, we use different classes to distinguish between the overall program (menu) and the different games. This way there is not just one class that includes every single method, which would be so messy. Each class focuses on a certain part of the game. Another pattern that we use is iterator which is apart of GoF behavioral category. Iterator is the process of going through a sequence of code multiple times. We use iteraltors in both of our tik tac toe and our hangman games. In our tik tac toe game, iterators are using to cycle through the winning conditions since there are many ways to win. After each player has a turn the winning condition method has to be called to go through the board and check to see if that was a winning move. For the hangman game, for each letter guessed by the user the program has to do two checks, one to see if the letter is the in the chosen word and another to check to see if that letter is the last letter for the word or phrase.