Game Specification

**Specification:**

Develop a Mastermind program. Mastermind is a two-player memory puzzle game where one player chooses an assortment of colored pegs in a specific patter and the second player has a certain number of tries to discover the pattern.  The user has the choice of either playing against the computer or another user. If playing against another user, the first user will have the opportunity to select the arrangement and colors of the balls, otherwise the computer will randomly determine the combination. The second user will then proceed guessing the arrangement. The program will track the second user's guesses, validate the guess and respond with either a cue that the correct color was guessed or both the correct color and placement was guessed, and finally determine if the user has won before a determined amount of turns.

**How to Move/Take a Turn:**

The player places a guess of the code in one row.  When the player provides the input, the computer will respond by placing the black and white pieces to show how much of the guess is right:

1.  Each white peg means that one of the guessed pegs is correct, but is in the wrong hole.

2.  Each black peg means that one of the guessed pegs is correct, and is in the right hole.

**Board and Pieces:**

The board is 12x4 with pieces that are 6 (red, blue, yellow, green, orange, purple) different colors used to create the code and for the player to guess.  There are additionally black and white pieces used to mark how much of the code was guessed.

**How the Game Ends:**

1.  The player successfully guesses the code.

2.  The player fails to guess the code in the allotted amount of turns.