Function generateCode(inputs):

    colors = [1, 2, 3, 4, 5, 6, 7, 8] //there is 8 colors in the game

    seed random generator with time

    for loop

        places random digits in an array

Function countPegs(inputs):

    define redpegs and white pegs as integers equal to 0

    for loop where it is less than the code length

        if the code guessed is equal to the code generated, increment the redPegs // Red pegs indicate the digit as a correct input

    for loop counts the guess input, and compares that with the code

        increment the white peg count if the code count and guess are the same, but not in the correct index order

Main function:

    Display the welcome message

    Ask the user to choose the length of the code (4, 6, or 8)

    Ask the user if duplicates are allowed in the code

    Generate a code of the chosen length

        with or without duplicates

    Set the number of remaining guesses to 10

    While the user has remaining guesses:

        Ask the user for their guess

        Validate that the guess is of the correct length and contains only valid colors

        Calculate the number of red and white pegs

        Display the number of red and white pegs

        If the user guessed the code correctly, display a congratulations message and the number of guesses it took

    if the user ran out of guesses,

        display the code and inform them that they have lost.