Name: Mubashar Khan **Assignment #:** 3

Summary of Problem Statement

Problem # 2

Ask user to enter either a color band or a resistance and use that information to find either the resistance or the color band.

Known / Input

load('P2_ColorGuide.mat')
Resistance (Resist) [Ohms]
Color [-]

Unknown / Output

First_Band
Second_Band
Multip_Band
part1_Answer
part2_Answer

Assumptions

The user does not enter negative values for any of the numerical quantities.

Other Variables

First_Color - Stores the numerical value of the user input color
Second_Color - Stores the numerical value of the user input color
Third_Color- Stores the numerical value of the user input color

Algorithm

Start with asking the user to choose either a resistor input or a color input
Then the program uses conditionals to see if the user chose resistor or color and then branches into 2 main pathways
If the user didn't choose one of the two options, the get an error
The path for resistors to color bands starts by counting the number of zeros after the first two elements.
This is then used to determine the multiple by raising 10 to the power of the number of zeros + 1.

Because of the way the array ColorCode is set up(starts with 1 instead of 0), I had to add 1 to each of the values I called in order to get the correct output

Then I converted my 3 numerical value into char values using char(ColorCode(n))
After that it was just a matter of outputting the code with every possibility in mind.

Test Cases

Using Test Case 1 with the user choosing Resistance [5 6] I got the output: Green Blue Black