

Program 8

switch

Name: _____ Time spent: _____ min

Create a program that continuously reads in resistor band colors from the user and then calculates and prints the resistor value. Assume a 4-band resistor configuration and ignore the tolerance band (3 bands are entered). 100 pts

You must use a switch statement when interpreting the color values.

Use the following prototypes:

```
// Requests and reads 3 band inputs  
void get_bands(int * b1, int * b2, int * b3);
```

```
// convert a band color (char) to an integer  
// called from inside get_bands()  
int convert_band(char band_char);
```

Note:

```
// calculates the resistance but does not print it  
float calc_res(int tens, int ones, int exp);
```

Print outside the function

You will need to use the **pow** function from the **math.h** library

```
#include <math.h>
```

pow(base, exponent) evaluates as $\text{base}^{\text{exponent}}$

pow(10,3) evaluates to $10^3 = 1000$

pow(10,foo) evaluates to $10^{\text{foo}} = 10000$ if **foo = 4**

Provide **flow diagram**, **code**, and **results** for {r, n, b}, {o, y, g}, {l, v, r}, {w, e, o}

Programming_Project.exe [C/C++ Application] [pid: 37]

```
Program 8 - Resistor Value Calculator  
Created by Dr. Johnson
```

```
Use b - black, n - brown, r - red, o - orange, y - yellow, g - green, l - blue, v - violet, e - grey, w - white,  
please enter the value for the first band: y  
please enter the value for the second band: g  
please enter the value for the third band: r  
Your resistor value is: 4500.000000
```

```
Use b - black, n - brown, r - red, o - orange, y - yellow, g - green, l - blue, v - violet, e - grey, w - white,  
please enter the value for the first band:
```