#include "stdafx.h"

#include <stdio.h>

#include <string.h>

#include <math.h>

#include <conio.h>

int compare (char array2[][7],char array1[][7], int size);

int \_tmain(void)

{

char \*color\_codes[] = {"black", "brown", "red", "orange", "yellow", "green", "blue", "violet", "gray", "white",""}; //sets colors in a the string with respect to their value i.e black = 0 white = 9

char band\_one[16];

char band\_two[16];

char multiplier[16];

double resistance;

char again[] = {"y"};

char check[] = {"y"};

char loop = 'y';

int x,y,z,a,b,c;

while ('y' == loop) //loops as long as the user wants to continue to decode more resistors

{

printf("Enter the colors of the three bands in all lower case");

printf("band one>");

scanf("%s", band\_one);

printf("band two>");

scanf("%s", band\_two);

printf("band one>");

scanf("%s", multiplier);// collects feed back from user in strings to later be compared to the color codes

for( x=0; strcmp( color\_codes[x], "" ) != 0 ; x++ ) // This will loop through all the colors in your array once. even if they enter black, black, black you look at all 7 but you only loop once so its a trade off

{

if ( strcmp( band\_one, color\_codes[x] ) == 0 )

{

a= x;

}

if ( strcmp( band\_two, color\_codes[x] ) == 0 )

{

b=x;

}

if ( strcmp( multiplier, color\_codes[x] ) == 0 )

{

c=x;

}

}

if ( a< 0 || b < 0 || c <0 )

{

printf("Error one of the colors you entered is bad"); // You can also check a b and c seperately for cleaner error message

}

else

{

resistance= (10\*a+b)\*(pow(10.0,c))/1000; //calculates the value a is in the tens place so multiplied by ten b is ones and c is how many zeros follow the two digit number, then divided by 1000 to set in kilo ohms

printf("The resistors value is %.2lf k ohms", resistance);

}

printf("\nPress y to continue or press n to quit\n>");

scanf("%s", check);

if (strcmp(again,check)==0)

{

loop='y';

}

else

{

loop='n';

}

}

return(0);

}