#include <stdio.h>

#include <conio.h>

int main ()

{

printf("\n#### C Program to find Voltage using Ohm's Law\n");

float I, R, V;

printf("\n Enter the value of Current I = ");

scanf("%f",&I);

printf("\n Enter the value of Voltage V = ");

scanf("%f",&V);

R=V/I;

printf("\n The required Resistance = %f", R);

///Program to calculate colour code of the resistor

void getColorCode(char colorCode[]);

void getResistorValue(char colorCode[], int colorValue[]);

int main (void)

{

int result = 0;

char Code[4];

int Value[4];

int i;

printf("This program will calculate the value of a resistor.\n\n");

printf("B = Black\nN = Brown\nR= Red\nO = Orange\nY = Yellow\n");

printf("G = Green\nL = Blue\nV = Violet\nE = Gray\nW = White\n\n");

printf("Enter the 4-character color description of the resistor: ");

getColorCode(Code);

for (i = 0; i < 4; i++)

getResistorValue(Code[i], Value[i]);

printf("The resistor with color code %c %c %c %c has a value of %d Ohms.",

Code[0], Code[1], Code[2], result);

return 0;

}

void getColorCode(char Code[])

{

int i;

for(i = 0; i < 4; i++)

Code[i] = getchar();

}

void getResistorValue(char colorCode[], int colorValue[])

{

int i;

int result;

switch (colorCode[i])

{

case('b'):

case('B'):

result = 0;

break;

case('n'):

case('N'):

result = 1;

break;

case('r'):

case('R'):

result = 2;

break;

case('o'):

case('O'):

result = 3;

break;

case('y'):

case('Y'):

result = 4;

break;

case('g'):

case('G'):

result = 5;

break;

case('l'):

case('L'):

result = 6;

break;

case('v'):

case('V'):

result = 7;

break;

case('e'):

case('E'):

result = 8;

break;

case('w'):

case('W'):

result = 9;

break;

}

colorValue[i] = result;

}