1. How many unique colour values can the colour variable contain?

The colour variable can hold up to …

1. What is the minimum value, maximum value, and range for each colour component?

Each colour component has a minimum value of 0 and a maximum value of 255 (0x00 and 0xFF)

1. Suppose the red component of the RGBA colour is to be stored in an 8-bit integer (byte) variable, and is set to the decimal value

Byte red = 94

Write this value as a binary number

94 % 2 = 0

47 % 2 = 1

23 % 2 = 1

11 % 2 = 1

5 % 2 = 1

2 % 2 = 0

1 % 2 = 1

Binary = 01011110

1. The byte containing the red value (94) from question 3 is now to be stored in the RGBA colour value (inthe left-most byte).
2. What is the decimal value of the binary number from question 4?

Hex :0x5E000000

Decimal :1577058304

Binary:1011110000000000000000000000000

1. Write the bit shifting operation (in C#) that will move all bits from the ‘R’ position in the colour variable to the ‘G’ position.

colorVar >>= 8; or colorVar = colorVar >> 8;

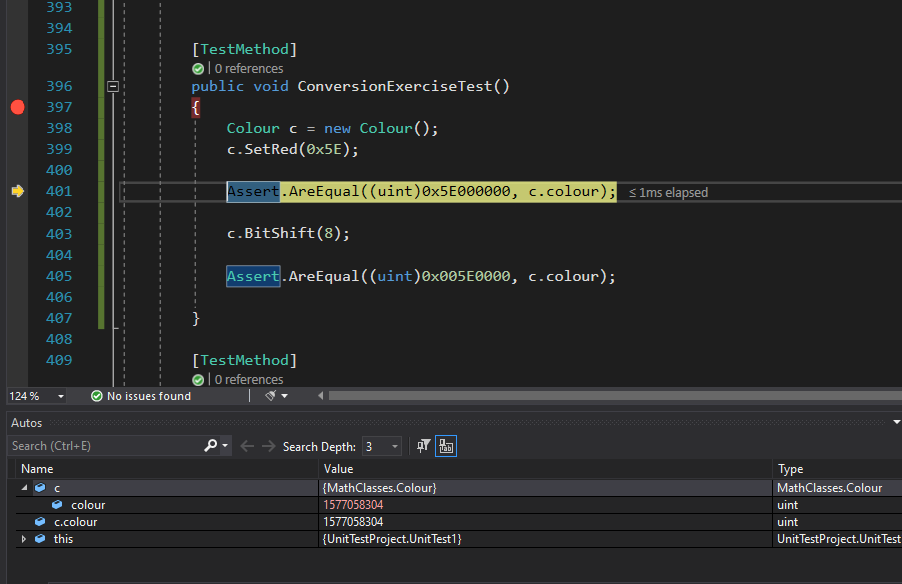
1. Our colour value now has the green colour component set, and no red, blue, or alpha colour component values.What are the decimal and binary value of the colourvariable now?

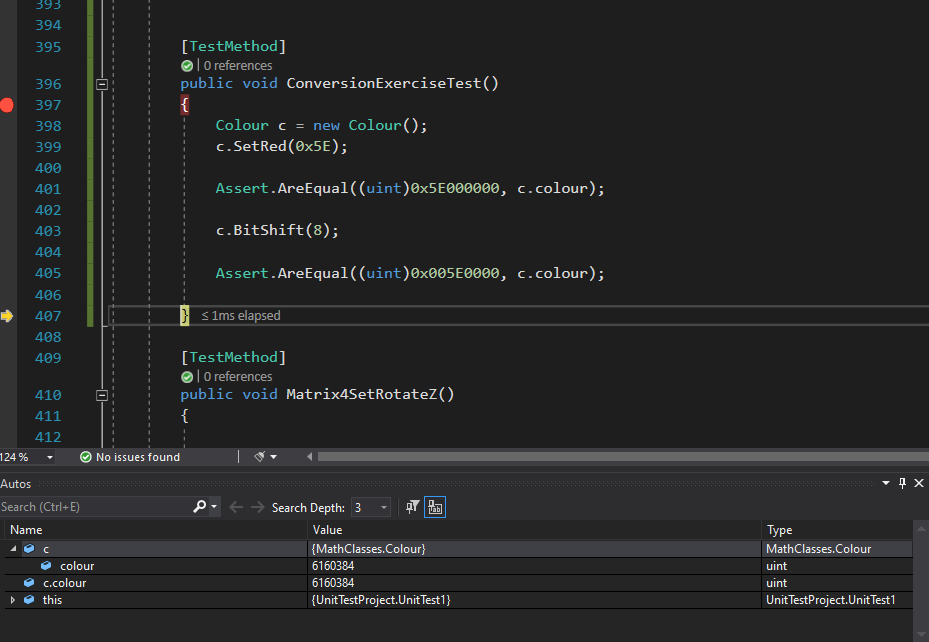
Hex:0x005E0000

Decimal:6160384

Binary:10111100000000000000000

1. After you have created your Colour class and implemented all the functions listed in the class definition above, add at lease 1 new unit test to the unit test program using your answers in this exercise to verify your code.





Was correct