C# Programming Homework 16

Chapter 16, C# Step by Step

November 6, 2019

Readings

Read chapter 16 in the C# Step by Step book.

Discussion Questions

Answer the discussion questions in writing.

1. Give five examples (using valid C# code) of the five bitwise operators listed in the text.

~ Not, << left shift, | Or, & and, ^ XOR

Result = ~d

Result = d << 3

Result = d | m

Result = d & m

Result = d ^ m

1. Does C# implement the right-shift (>>) operator? If so, give an example of its operation using value

C# code.

Yes

1. Explain in detail this code: bits & (1 << index);.

Returns a value from the entered bits containing a 1 in each position where both of the operands have a 1 and the zero from the right moves one index space to the left.

1. Explain in detail this code: bits |= (1 << index);.

Returns a value from the entered bits containing a 1 in each position in which either of the operands has a 1 and the zero from the right moves one index space to the left.

1. Explain in detail this code: bits &= (1 << index);.

6. How does C# interpret this? bool peek = bits[n];

7. How does C# interpret this? bits[n] = true;

8. How does C# interpret this? bits[n] ^= true;

9. Assume that users were assigned read, write, and execute permissions according to this scheme: read

= 1, write = 2, execute = 4. How would you interpret the following user permissions:

(a) permission = 0

(b) permission = 1

(c) permission = 2

(d) permission = 3

(e) permission = 4

(f) permission = 5

(g) permission = 6

(h) permission = 7

10. Answer the previous question by converting the decimal permissions into binary permissions. What

does this tell you about using this scheme of permissions?