Assignment 4

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7.1

(p. 155) For each of the following integer constants, give its decimal value and show the expression

of your calculation.

(a)

077 - Octal Number 077

= 7\*8^1 + 7\*8^0

= 63

(b)

0x77 - Hexadecimal Number 0x77

= 7\*16^1 + 7\*16^0

= 112 + 7

= 119

(c)

0XABC - Hexadecimal Number 0XABC

= 10\*16^2 + 11\*16^1 + 12\*16^0

= 2560 + 176 + 12

= 2748

Define the initializer for the segments array (Exercise 6, p. 177).

const int segments[10][7] = { {1,1,1,1,1,1,0},  
 {0,1,1,0,0,0,0},  
 {1,1,0,1,1,0,1},  
 {1,1,1,1,0,0,1},  
 {0,1,1,0,0,1,1},  
 {1,0,1,1,0,1,1},  
 {1,0,1,1,1,1,1},  
 {1,1,1,0,0,0,0},  
 {1,1,1,1,1,1,1},  
 {1,1,1,1,0,1,1} }

Shrink the initializer as much as you can by using the shortcuts described in Section 8.2.

I am not sure which answer is correct. The top one, well declaring less elements, only eliminates 9 elements (18 characters) from the declaration. The below removes no elements, but removes 20 characters.

const int segments[10][7] = { {1,1,1,1,1,1},  
 {0,1,1},  
 {1,1,0,1,1,0,1},  
 {1,1,1,1,0,0,1},  
 {0,1,1,0,0,1,1},  
 {1,0,1,1,0,1,1},  
 {1,0,1,1,1,1,1},  
 {1,1,1},  
 {1,1,1,1,1,1,1},  
 {1,1,1,1,0,1,1} }

const int segments[10][7] = { 1,1,1,1,1,1,0,  
 0,1,1,0,0,0,0,  
 1,1,0,1,1,0,1,  
 1,1,1,1,0,0,1,  
 0,1,1,0,0,1,1,  
 1,0,1,1,0,1,1,  
 1,0,1,1,1,1,1,  
 1,1,1,0,0,0,0,  
 1,1,1,1,1,1,1,  
 1,1,1,1,0,1,1 }