

Homework: 位运算

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- 题目1

Fill in the table below

Binary	Octal	Decimal	Hexadecimal
101 0101 0110			
	777		
			0x1c5
		2015	
	2015		

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- 题目2

- Given A and B with hexadecimal expression 0x7F and 0xBA respectively.  
Calculate the values of the following expressions.
- a)  $A \& B$
- b)  $A | B$
- c)  $A ^ B$
- d)  $\sim A | \sim B$
- e)  $A \& \& B$
- f)  $A || B$

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- 题目3
  - Design C expressions using bitwise (`&` | `~` `^`) and logical (`&&` `||` `!`) operators, which return 1 under the specific conditions described below, otherwise return 0.
    - a) all bits of  $x$  are 1.
    - b) all bits of  $x$  are 0.
    - c) bits of  $x$ 's least significant byte are 1.
    - d) bits of  $x$ 's least significant byte are 0.

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- 题目4

- Design a C expression, which generates a word (32-bit) consisting of the lower 16 bits of x and the remaining bits of y.
- For example,  $x = 0x89ABCDEF$  and  $y = 0x76543210$ , it will generate  $0x7654CDEF$