

ICS Homework Week 3

September 25, 2020

1. Suppose that A and B have 2-byte values 0xABCD and 0x5E2F, respectively. Fill in the following table indicating the 2-byte values of the different C expressions:

Expression	Value	Expression	Value
$A \& B$		$A B$	
$A \& \& B$		$A B$	
$\sim A \& \sim B$		$!A !B$	
$A \& !B$		$A \wedge B << 3$	

2. Using $|$, $\&$ and $-$, write a C expression that is equivalent to $A \wedge B$.
3. Suppose we number the bytes in a 4-byte word from 0 (least significant) to 3 (most significant). Design a C expression, which will return a 4-byte word in which byte i of word X has been replaced by byte i of word Y .
For example, $X=0x12345678$, $Y=0xABCDEF09$, and $i=2$, it will generate $0x12CD5678$