ICS Homework Week 3

September 24, 2019

1. Suppose that A and B have 2-byte values 0xF00D and 0xBEEF, respectively. Fill in the following table indicating the 2-byte values of the different C expressions:

Expression	Value	Expression	Value
$A\&B$		$A\|B$	
$A\&\&B$		$A\|\|B$	
$\sim A\& \sim B$		$!A\|\|!B$	
$A\&!B$		$A\hat{}B << 3$	

2. Using only $\sim$ and |, write a C expression that is equivalent to A&B.

3. Using only $\sim$ and &, write a C expression that is equivalent to A|B.

4. Using |, & and $-$, write a C expression that is equivalent to A^B.

5. Design a C expression, which generates a word (4-byte) consisting of the 3 least significant bytes of A and the most significant byte of B.

   For example, A=0xABADBEEF and B=0xDECEA5ED, it will generate 0xDEADBEEF