**CS 4400 - Problem Set 4**

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1. Problem 3.56:  
   1. %esi holds x  
      %ebx holds n  
      %edi holds result  
      %edx holds mask
   2. The initial value of result is -1  
      The initial value of mask is 1
   3. The test condition for mask is: mask != 0
   4. This is how mask gets updated: mask = mask << n
   5. This is how result gets updated: result ^= mask & x
   6. Here is the entire function, with all code filled in:

**int** **loop**(**int** x, **int** n)

{

**int** result = -1;

**int** mask;

**for** (mask = 1; mask != 0; mask = mask << n) {

result ^= mask & x;

}

**return** result;

}

1. Problem 3.58:
2. Problem 3.62: