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4/16/23

CS33 HW #2

**Problem 3.60:**

A) %rdi holds x, %esi holds n, %rax is result, and %rdx is mask.

B) **result** is 0 initially

**mask** is 1 initially.

C) Basically ands mask with mask.

It tests: if mask != 0

D) mask gets updated by getting left shifted by the 8 lower bits of n.

E) result gets updated by being | to r8 which is currently holding mask&x

F)

long loop(long x, long n) {

long result = 0;

long mask;

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

result |= x & mask;

}

return result;

}

**Problem 3.63**

long switch\_prob(long x, long n) {

long result = x;

switch(n) {

case 60:

case 62:

result = 8 \* x;

break;

case 63:

result = x;

result = result >> 3;

break;

case 64:

result = x;

result = result << 4;

result -= x;

x = result;

case 65:

x = x\*x;

default:

result = x+75;

}

return result;

}