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CS 33 — 1I

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Homework #2

3.60

1. x = %rdi

n = %esi within %rsi

result = %eax within %rax

mask = %edx within %rdx

1. result = 0

mask = 1

1. mask != 0 //mask cannot be 0
2. mask << n //mask is updated by being multiplied by 2n
3. result |= (x & mask) //result is updated by: result or’d with( x and’d with mask)
4. long loop(long x, long n)

{

long result = 0;

long mask;

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

{

result |= (x & mask);

}

return result;

}

3.63

long switch\_prob(long x, long n)

{

long result = x;

switch (n)

{

case 60:

case 62:

result = x \* 8;

break;

case 63:

result = x >> 3;

break;

case 64:

result = (x << 4) - x;

x = result;

case 65:

x \*= x;

result = x;

case 61:

default:

result = 75 + x;

break;

}

return result;

}