

LA Worksheet #2

1. `int KillKthBit(int n, int k) { # int = 32 bits`

`int shift = 1 << (k-1) # sets up byte`

`shift &= n; # sets shift to either 1 or 0`

`return n ^ shift; # xors w/ shift, sets place to 0`

`}`

2. `movq` copies the source to the destination and may involve dereferencing. `leaq` doesn't involve dereferencing and directly accesses memory as the source

↳ `movq (%rax), %rax` moves the object in the memory pointed to by `%rax` into `%rax`

↳ `leaq (%rax), %rax` moves the address of `%rax` into `%rax`

3. `movq (%rax), %rcx`

4. `cool2 → cmpl %eax, %edi → %edi - %eax → jgcrif (a > b)`

5. `$0x110 → 0x110`

`%rax → 0x104`

`0x110 → 0x42`

`(%rax) → 0x34`

`8(%rax) → 0x19`

`(%rax, %rbx) → 0xCC`

`3(%rax, %rcx) → 0x19`

`256(, %rbx, 2) → 0xCC`

`(%rax, %rbx, 2) → 0x19`