1. Data Lab Practice (from codesignal.com)

Write a function that, given a number n, returns another number where the k^{th} bit from the right is set to to 0.
Examples:
killKthBit(37, 3) = 33 because $37_{10} = 100101_2 \sim> 100001_2 = 33_{10}$
killKthBit(37, 4) = 37 because the 4^{th} bit from the right is already 0.

```
int killKthBit(int n, int k) {



}
```

2. `mov` vs `lea` - describe the difference between the following:

```
movl (%rdx), %rax
leal (%rdx), %rax
```

3. What would be the corresponding instruction to move 64 bits of data from register %rax to register %rcx?

4.

```
int cool1(int a, int b) {
     if ( b < a )
          return b;
     else
          return a;
}

int cool2(int a, int b) {
     if ( a < b )
          return a;
     else
          return b;
}
```

```
int cool3(int a, int b) {
     unsigned ub = (unsigned) b;
     if ( ub < a )
          return a;
     else
          return ub;
}
```

Which of the functions would compile into this assembly code:

```
       pushl %ebp
       movl %esp, %ebp
       movl 8(%ebp), %edx
       movl 12(%ebp), %eax
       cmpl %eax, %edx
       jge .L4
       movl %edx, %eax
.L4:   movl %ebp, %esp
       popl %ebp
       ret
```

5. Operand Form Practice (see page 181 in textbook)

Assume the following values are stored in the indicated registers/memory addresses.

Address	Value	Register	Value
0x104	0x34	%rax	0x104
0x108	0xCC	%rcx	0x5
0x10C	0x19	%rdx	0x3
0x110	0x42	%rbx	0x4

Fill in the table for the indicated operands:

Operand	Value	Operand	Value
$0x110	_____	3(%rax, %rcx)	_____
%rax	_____	256(, %rbx, 2)	_____

0x110	_____	(%rax, %rbx, 2)	_____
(%rax)	_____		
8(%rax)	_____		
(%rax, %rbx)	_____		