Week 3 Quiz

Q1.

What is the output of the following function?

```python
def count(a, b):
    if a >= b:
        print(a)
    else:
        count(a + 1, b)
        print(a)

count(1, 5)
```

    A. 1 2 3 4 5

    B. 5 4 3 2 1

    C. 1 3 5

    D. 5 3 1

Q2.

Consider this function:

```python
def count_down_by_two(n):
    if n == 0:
        # base case
        print(n)
    else:
        print(n)
        count_down_by_two(n - 2)
```

Which of the following function calls will produce infinite recursion?

    A. `count_down_by_two(8)`

    B. `count_down_by_two(100)`

    C. `count_down_by_two(0)`

    D. `count_down_by_two(3)`

Q3.

What is the big-O running time of the following function?

```python
def count_down(n):
    if n <= 0:
```

```
        print(n)
    else:
        print(n)
        count(n - 1)
```

A. O(1)

B. O(logn)

C. O(n)

D. O(n^2)