CS 101 Quiz Questions

Quiz one

1. Evaluate this Python expression

```
>>> 5 + 30 % 8
```

11

2. What would be returned by this sequence of commands?

```
>>> x = 5
>>> y = 2
>>> 2 * x + y
```

12

3. What would be returned by this sequence of commands?

```
>>> x = 9
>>> x % 5 > 3
```

True

Quiz two

1. File extensions tell us what kind of file we are dealing with. Examples include pdf, txt, doc, docx, rtf, rtfd, xls, jpg, and html. We want to write a function to extract these. Provide one line that finishes this function (assume there is only one "." in the name).

```
def extension(filename):
    """Returns the file extension from the string called filename."""
```

return filename[filename.index('.')+1:]

2. Given these three functions, what is return by f(3)

```
def f(x):
      return x + g(x)

def g(x):
      y = 10 * h(x) + h(x/2)
      return y

def h(x):
      return 2 * x
```

65

3. Given the following definition, what is returned by mangle(“kaled”)

```
def mangle(text):
	return text[-1] + text[1:-1] + text[0]
```

‘dalek’

Quiz three

1. Provide a slice of a string called str that returns the last three characters

str[-3:]

2. Why is recursion a poor choice for finding Fibonacci numbers?

It recomputes values, making it very slow.

3. Provide a base case (condition and response) for a function that counts the number of times an item x appears in the sequence.

```
if len(sequence) == 0:
	return 0
```

Quiz four

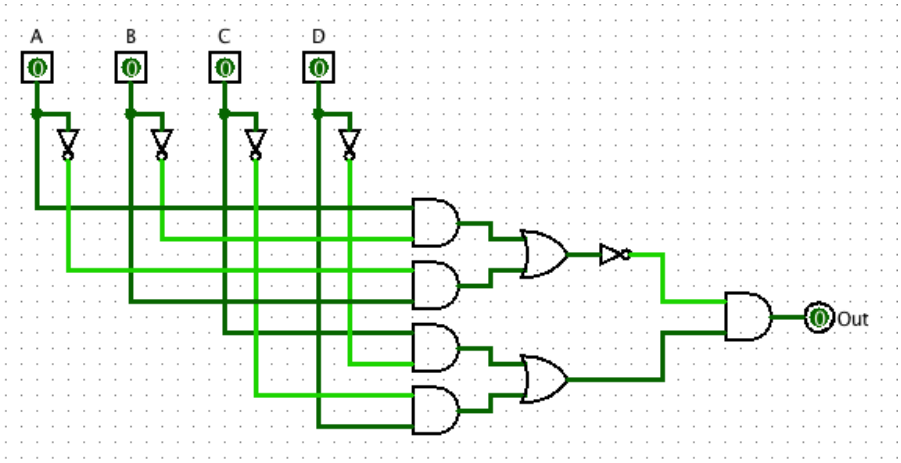
1. In a von Neumann machine, instructions are stored where?

Memory

2. What are the three primary colors of light?

red, green, and blue

3. Given this (familiar) circuit, what is output when a=1, b=1, c=0, d=1



1

Quiz five

1. What is returned by this line of Python: range(4,11)?
[4,5,6,7,8,9,10]

2. Use the range function to generate this list: [2,5,8,11,14]?

range(2,15,3)

3. What are the values of x and y when the following loop is complete?

```
x = 1
y = 5
while x < y:
     x = x + 2
     y = y + 1
```

both x and y are 9