PS 2: Problems 0, 1, and 2

Problem 0: Reading and response

Put your response to the reading below.

I found the most interesting idea is that artificial intelligence could understand and answer the questions posted in natural language and have a confidence system which is similar to humans. It shows an improvement in the field of artificial intelligence which makes it more useful and humanized. Watson's technology could be used in a physician's assistant service to allow doctors to query a cybernetic assistant. Watson- style thinking is certainly more accurate and logical than humans'. But the confidence system, which makes it take longer to buzz in when it's less confident, is also similar to hesitation in human-style thinking.

Problem 1: Tracing function calls

global variables

a	**b**
7	3
16	3

bar's local variables

a	**b**
14	7
6	3
10	5

foo's local variables

a	**b**	**c**
3	7	6
3	16	6

output (the lines printed by the program)

```
7 3
7 3
16 3
```

Problem 2: Thinking recursively

2-1)

```
mystery(3, 7)
-------------
    a = 3
    b = 7
    myst_rest = mystery(2, 5) = 8
    return 15

    mystery(2, 5)
    -----------------
        a = 2
        b = 5
        myst_rest = mystery(1, 3) = 3
        return 8

        mystery(1, 3)
        -----------------
            a = 1
            b = 3
            myst_rest = mystery(0, 1) = 0
            return 3

            mystery(0, 1)
            -----------------
                a = 0
                B = 1
                return 0
```

2-2) 15

2-3) 4 stack frames

2-4) mystery(-1. -2)
It produces an infinite recursion because a * b will not be equal to zero, so it will never reach the base case.