Problem Set 2, Problems 0, 1, and 2

Problem 0: Reading and response

Put your response to the reading below.

As stated in the article, Watson could contribute to the medical field as a medical assistant. However, I believe that this technology can surpass that role and eventually be able to quickly diagnose patients through a series of questions that the patient could answer for the machine to know his/her symptoms. In general, technologies like Watson seem to be able to fulfill the very vital role of allowing users to easily communicate with machines without the need of any CS knowledge. I don't see how AI like Watson couldn't make an impact. As a matter of fact, technologies like Siri, Google Home, and Echo seem to be a type of Watson-like AI capable of answering queries and fulfilling the user's request through verbal communication.

Problem 1: Tracing function calls

`global variables`

a	**b**	**c**	**d**
3	5	2	4
3	5	2	7

`hello's local variables`

a	**b**	**c**	**d**
3	5	2	4
3	5	7	4
3	5	7	6

`goodbye's local variables`

a	**c**	**b**
5	4	
5	4	7

`adios's local variables`

a	**b**	**c**	**d**
5	5	4	4
3	4	5	5

`output (the lines printed by the program)`

```
3 5 2 4
5 5 4 4
3 4 5 5
hello 3 5 7 6
3 5 2 7
```

Problem 2: Thinking recursively

2-1)

```
mystery(0, 9)
-------------
    a = 0
    b = 9
    myst_rest = mystery(1, 7) = 15
    return 24

    mystery(1,7)
    -----------------
        a = 1
        b = 7
        myst_rest = mystery(2, 5) = 8
        return 15

         mystery(1,7)
         -----------------
           a = 2
           b = 5
           myst_rest = mystery(3, 3) = 3
           return 8

           mystery(3, 3)
           -----------------
                a = 3
                b = 3
                return 3
```

2-2)24

2-3)5

2-4) Since “a” would never equal “b”, the values of “a =3” and “b = 2” would cause infinite recursion.