Problem Set 3, Problems 0 and 1

Problem 0: Reading and response

Put your response to the reading below.

The contributing factor within the bug's origins that strikes me as the "most preventable" is the decision to leave the function meant to align the system prior to launch running for the first forty seconds of flight time. This factor strikes me as the most preventable as it was an unnecessary decision in the first place, and was ultimately the main reason for the downfall of the rocket. Furthermore, I agree with the statement that software "does not fail in the same sense as a mechanical system," as the article goes on to state that software behaves more like an organism than like a machine, and thus fails in an entirely different way as a mechanical system, dying as opposed to simply breaking down. In addition, the failure of a software program is often much more preventable, because as long as the software has been reviewed and tested enough, it is practically immune to failure, as opposed to a machine.

Problem 1: Tracing list comprehensions and recursion

1-1

w	scored_words
'do'	[['o', 'do'],
'you'	[['o', 'do'], ['u', 'you'],
'comprehend'	[['o', 'do'], ['u', 'you'], ['d', 'comprehend'],
'this'	[['o', 'do'], ['u', 'you'], ['d', 'comprehend'], ['s', 'this']]

1-2 value assigned to `best_pair`

```
['u', 'you']
```

1-3 value returned by `mystery1`

```
you
```

1-4

```
mystery2('amazes', 'a')
    s = 'amazes', c = 'a'
    result_rest = mystery2('mazes', 'a') = 'asezm'
    return 'aasezm'

    mystery2('mazes', 'a')
        s = 'mazes', c = 'a'
        result_rest = mystery2('azes', 'a') = 'asez'
        return 'asezm'

        mystery2('azes', 'a')
            s = 'azes', c = 'a'
            result_rest = mystery2('zes', 'a') = 'sez'
            return 'asez'

            mystery2('zes', 'a')
                s = 'zes', c = 'a'
                result_rest = mystery2('es', 'a') = 'se'
                return 'sez'

                mystery2('es', 'a')
                    s = 'es', c = 'a'
                    result_rest = mystery2('s', 'a') = 's'
                    return 'se'

                    mystery2('s', 'a')
                        s = 's', c = 'a'
                        return 's'
```

1-5

```
aasezm
```