



Daily Coding Problem #82

Problem

This problem was asked Microsoft.

Using a `read7()` method that returns 7 characters from a file, implement `readN(n)` which reads `n` characters.

For example, given a file with the content "Hello world", three `read7()` returns "Hello w", "orld" and then "".

Solution

In this problem, it's easy to get tricked into using numbers to do accounting.

A simpler way to solve is to keep track of a remainder string. This string will represent the leftover text that couldn't be used in the previous `readN()` operation. Then all we'd need to do is call `read7()` until we have the desired `n` length. To make sure we handle the edge case of being end of file, we also need to exit if the call to `read7()` results in a text that's less than five characters:

```
class Reader:
    def __init__(self):
        self.remainder = ''

    def readN(self, n):
        result = self.remainder
        text = None

        while len(result) < n and (text is None or len(text) >= 5):
            text = read7()
            result += text

        self.remainder = result[n:]
```

```
return result[:n]
```

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