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Foundations of Programming, Python

Assignment 05

# Exceptions Are Hard

## Introduction

I struggled with exceptions this week and have more work to do to understand how they work. One of the exception examples used `__doc__`, so I investigated what double underscores do. I also found out how to use `pass` in an if statement. Additionally, I reviewed alternative ways to read lines from a file.

## Double Underscores

Before taking this course, I frequently struggled with understanding the purpose of double underscores, also known as dunder. I often encountered methods like `__init__(self)`, which I now know is a special method. This week's assignment introduced me to `__doc__`, a special attribute. Despite diving deeper into these concepts, I still don't fully grasp how they work, but I have learned what to call them.

## If Statement Place Holder

During testing, I encountered an error because my `if` statement was empty. Initially, I fixed this by adding a `print` statement as a placeholder. Later, I learned about the `pass` statement, a null operation that serves as a placeholder. This allows me to write code that does nothing, which is useful in the development phase for functions, loops, or other constructs that haven't been implemented yet.

## Reading Lines In File

I observed that both `for line in file` and `for line in file.readlines()` functioned correctly. Upon further investigation, I discovered that `file.readlines()` reads the entire file at once, whereas iterating directly over the file object processes one line at a time. While `readlines()` is less memory efficient, it can be useful if you need to work with multiple lines simultaneously or access the lines multiple times.

## Summary

This week required much more troubleshooting than previous weeks, but it's exciting to push the boundaries of my working Python knowledge. I discovered that double underscores serve a specific function and are not just for formatting. Additionally, I learned about two ways to make coding more efficient: using the `pass` statement and the `readlines()` method.