

# Assignment 2 Part 3

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## Problems Found:

### SeekPastEndOfFileError:

Most of the test cases that bypassed my security layer were testing the proper functioning of End of File counter. In order to maintain efficiency. I computed and maintained EOF inside the code. I used to modify it only if there was a valid write at. This caused error when the write that is pending has more characters than the actual EOF and its subsequent write used a bigger offset which is the within the length of previous write but more than the actual EOF of the file in Disk.

To fix this. I modified EOF logic to increase EOF even for pending write and reduce it back on undo.

### LockDoubleReleaseError:

This was caused because of the wrong implementation of lock in the security layer.

I was creating a new lock every time i had to acquire it. This made no difference as none of the threads were waiting for the lock to release.

I fixed it by creating a single lock at the starting of file creation. And acquiring the same lock when required.

### FileClosedError:

I faced this error because i was not checking if file is closed at the starting of writeat. This error was supposed to raise first in case of multiple exception. I fixed it by putting file closed error validation at first.

### RepyArgumentError:

I faced this error because i did not implement lock properly in security layer.

I fixed it by removing the lock implementation in all the unnecessary places and placing it only when the actual write is happening.