

Information, Security, and Privacy

Assignment 2 Part 3

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Fixes:

1) Exception handling

- I didn't handle any exceptions in the writeat() function, now I corrected it and handled all 3,
 - ReplyArgumentError is raised if the offset is negative or the data is not a string.
 - FileClosedError is raised if the file is already closed.
 - SeekPastEndOfFileError is raised if trying to write past the EOF.

2) Order of exception handling

- Mzg9288 had an attack case where it attacked the order in which it handles attacks, that was really interesting
- I fixed it and made it the order which is used by default.
- if offset < 0:
 - raise ReplyArgumentError()
- if not isinstance(data, str):
 - raise ReplyArgumentError()
- if self._is_closed:
 - raise FileClosedError()
- if offset > len(self.initial_content):
 - raise SeekPastEndOfFileError()

3) Locks

- I already had locks so I didn't have to handle them but that is a major vulnerability which can cause race conditions.

The above covered every mistake I made initially while designing the reference monitor. I have fixed all of them.