Changes made from assignment 2.1: Report

CHANGE1:

Change: Added a check to make sure that the offset is not less than 0 before calling writeat() on the LPfile object

Reason: This change prevents the user from writing data to the file beyond the end of the file.

How it is helpful: This change makes my code more secure and prevents potential file corruption.

CHANGE2:

Change: moved the code that writes the pending data to the file before the code that sets the pending data to None.

Reason: This change was made to ensure that the pending data is always written to the file before it is erased. This prevents data loss if the user calls the undo() function before the pending data has been written to the file.

How it is helpful: This change makes my code more reliable and prevents potential data loss.

CHANGE3:

Change: Added a lock to protect the pending writeat data.

Reason: This change was made to prevent race conditions. If two threads were to try to write to the pending writeat data at the same time, it could cause data corruption.

How it is helpful: This change makes my code more robust and prevents potential data corruption.

CHANGE4:

Change: Validated the arguments to the writeat() and readat() functions.

Reason: This change was made to prevent invalid operations. For example, if the user tried to call writeat() with a negative offset, the function would raise an exception.

How it is helpful: This change makes my code more robust and prevents potential errors.

CHANGE5:

Change: Closed the file properly when it is finished using it.

Reason: This change was made to ensure that all pending data is written to the file. If the file is not closed properly, it is possible that data could be lost.

How it is helpful: This change ensures that all data is written to the file and prevents potential data loss.

Summary:

Here are some additional benefits of the changes made:

- my code is now more predictable. It is clear what the code will do in all cases, even if the user provides invalid input.
- my code is now easier to maintain. It is easier to understand and modify code that is well-organized and well-documented.
- my code is now more reusable. my code can be used in other projects without having to make major modifications.

I hope this report is helpful. Please let me know if you have any other questions.