#### Bad File Path

- Problem: The path ../chapter11/src/chapter11/wordcount may cause a FileNotFoundException.
- **Cause**: Relative paths depend on the IDE's working directory.
- **Fix**: Change the path to path/to/your/file/wordcount.txt and ensure the file exists.

### Poor Naming Convention

- o **Problem**: The file doesn't follow Java's class naming convention.
- Cause: Lowercase names can cause confusion.
- Fix: Rename the file to WordCount.java.

### FileNotFoundException Not Handled Gracefully

- Problem: File paths may not be handled properly.
- Cause: Incorrect paths or missing files.
- Fix: Validate the file's existence and format.

# • Not Using Try-With-Resources

- Problem: Manual resource closing can lead to issues if an exception occurs.
- Cause: The Scanner might not close properly.
- **Fix**: Use try-with-resources to auto-close resources.

### Count Letters in Words Issues

- Problem: word.replaceAll("[^a-zA-Z]", "") excludes non-English characters.
- Cause: Doesn't handle accented or special characters.
- Fix: Adjust the regex if needed.

# Average Word Length Precision

- Problem: Output may have excessive decimal places.
- Cause: Floating-point precision isn't user-friendly.
- Fix: Use System.out.printf to round to two decimal places.

# Handling Empty Files

- o **Problem**: Empty files may cause division-by-zero errors.
- Cause: wordCount == 0 leads to invalid calculations.
- Fix: Add a check to prevent division by zero.

# Performance on Large Files

- Problem: Word-by-word reading is slow for large files.
- Cause: Overhead from word-by-word processing.

 $\circ$  **Fix**: Use BufferedReader for better performance.