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| DefectID | DefectName | Line of Code | Defect Description | Fixing Solution |
| 1 | Redundant Conditional Check | 14 | Wrong about logic when data is not only empty but also not empty | data == null && data.isEmpty() |
| 2 | Redundant Conditional Check | 8 | The conditional isProcessing == false is redundant, as isProcessing was just set to true earlier in the method | Remove isProcessing == false |
| 3 | Unhandled IOException in closeWriter | 25 | The closeWriter method calls writer.close() directly without handling potential IOException | try {  writer.close();  } catch (IOException e) {  System.out.println("Error closing writer: " + e.getMessage());  } |
| 4 | Missing Null Check for BufferedWriter | 18 | The writeData method calls writer.write(data) without verifying if writer is initialized. If writer is null, this will throw a NullPointerException | if (writer != null) {  writer.write(data);  } else {  System.out.println("Writer is not initialized.");  } |
| 5 | Potential Resource Leak in shutdown Method | 38 | If the writer was open, this can lead to a resource leak, as resources associated with writer won’t be released because it is null | if (writer != null) { try { writer.close(); } catch (IOException e) { System.out.println("Error closing writer during shutdown: " + e.getMessage()); } writer = null; } |