

Change request log

1 Team

BugHunters

Team Members:

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2 Change Request

Modify the status bar in jEdit to show the word offset of the caret from the beginning of the file and the number of words in the file with

3 Concept Location

Step #	Description	Rationale
1	<i>We ran the system</i>	
2	<i>We looked for the keyword "line, column[-virtual]" using grep.</i>	<i>Because this keyword was showing in the status bar while hanging mouse over the numbers. This leads us to find caret-tooltip property in jedit_en.prop file.</i>
3	<i>We searched "caret-tooltip" to find a class containing it.</i>	<i>Because we found out it is the only in the Java file, SatusBar.java.</i>
4	<i>We found a method updateCaretStatus in StatusBar.java which had the implementation of above functionality and found out TextArea class needed to be modified.</i>	
5	<i>We marked the class StatusBar and TextArea as "located".</i>	<i>We confirmed this class had to be modified.</i>

Time spent (in minutes): 30

4 Impact Analysis

Step #	Description	Rationale
1	<i>We made a list of classes, TextArea and StatusBar EditPane, View. We visited them to locate which parts needed to be changed.</i>	<i>To track the classes that could be impacted by the change.</i>
2	<i>We inspected the classes TextArea. jedit_en.prop and StatusBar They were marked as "to change" as well.</i>	<i>We realized this class had to be changed to include the following methods getCaretWord, and getWordCount. For StatusBar and jedit-en.prop, We realized these class had to be changed to modify the UpdateCaretStatus.</i>
3	<i>The classes, EditPane and View were discarded from the list of classes to change</i>	<i>Because the change we were going to make has nothing to do with these classes.</i>

Time spent (in minutes): 30

5 Actualization

Step #	Description	Rationale
1	<i>We modified the TextArea and StatusBar classes</i>	<i>In TextArea, we added two methods which their responsibilities are to count the word offset of the caret from beginning and the number of words in the entire file. In StatusBar, we modified the UpdateCaretStatus which their responsibility was displaying the word count format in the status bar.</i>
2	<i>We ran the existing test cases.</i>	<i>To make sure everything works.</i>

Time spent (in minutes): 45

6 Validation

Step #	Description	Rationale
1	<p><i>Test case defined:</i></p> <p><i>Inputs: given random sentences (Given in Fig 1)</i></p> <p><i>Expected output: word offset of the caret from the beginning and the number of words in the entire file.</i></p> <p><i>The status bar is shown in Fig 2.</i></p>	<p><i>This is the regular expected behavior.</i></p> <p><i>The test passed.</i></p>

Time spent (in minutes): 15

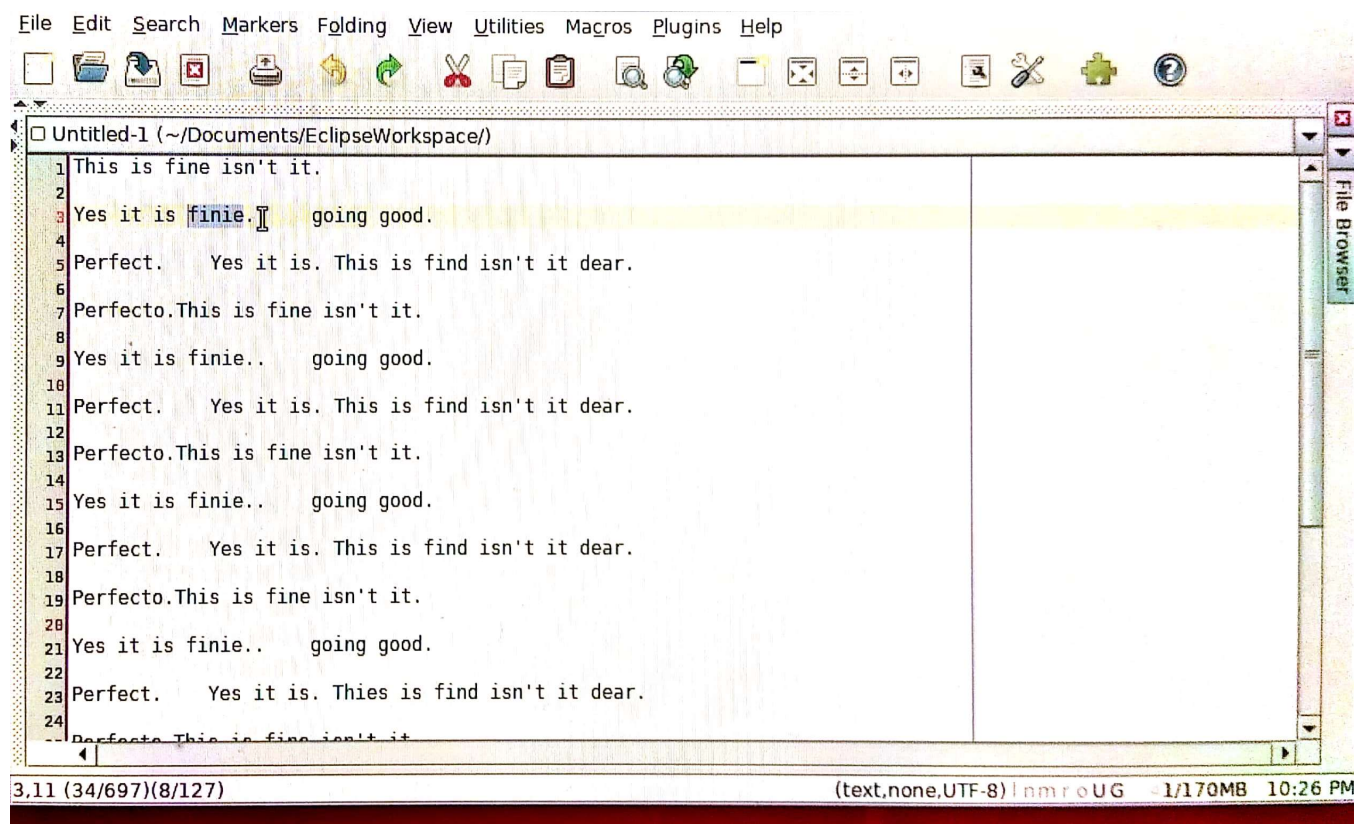


Fig 1) Inputs: Some Random Sentences

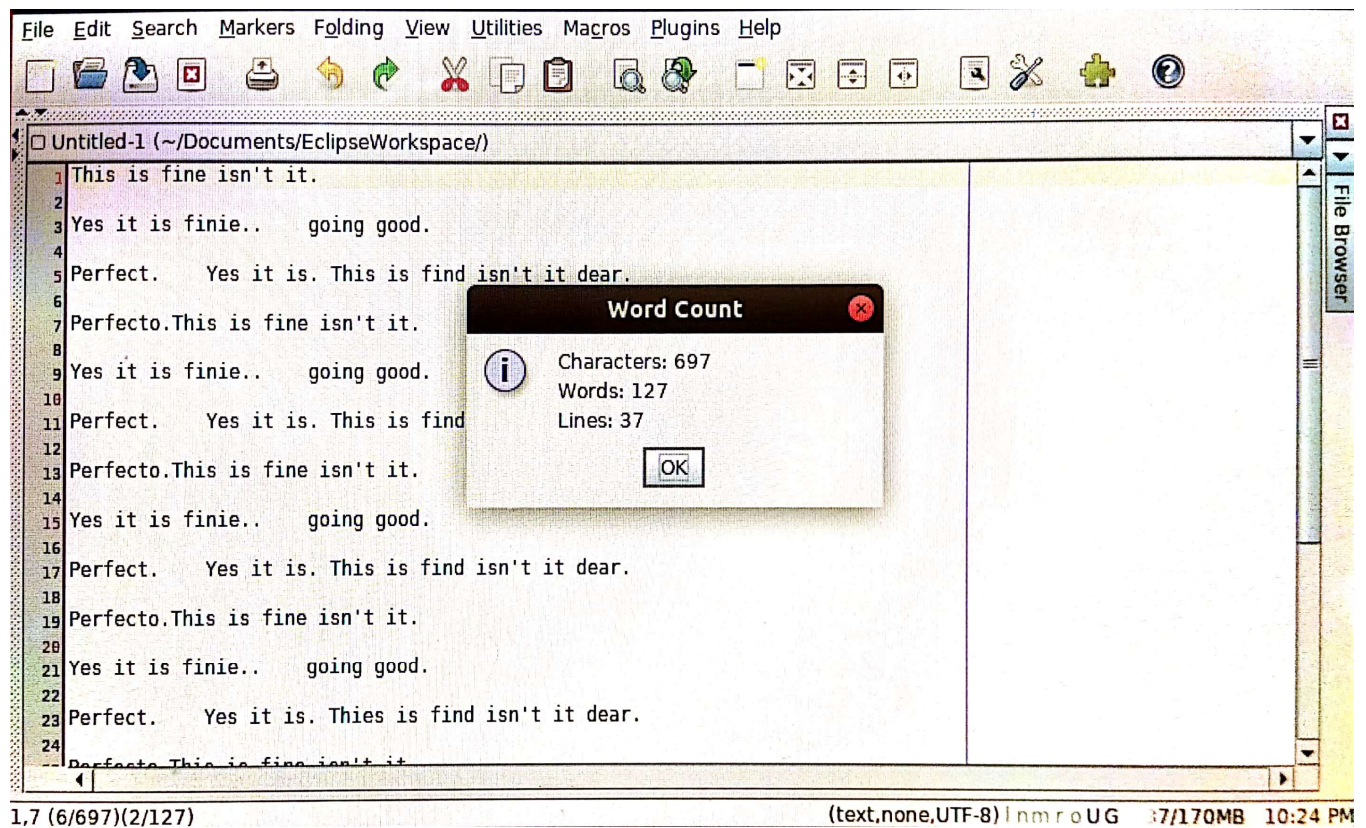


Fig 2) Expected Output

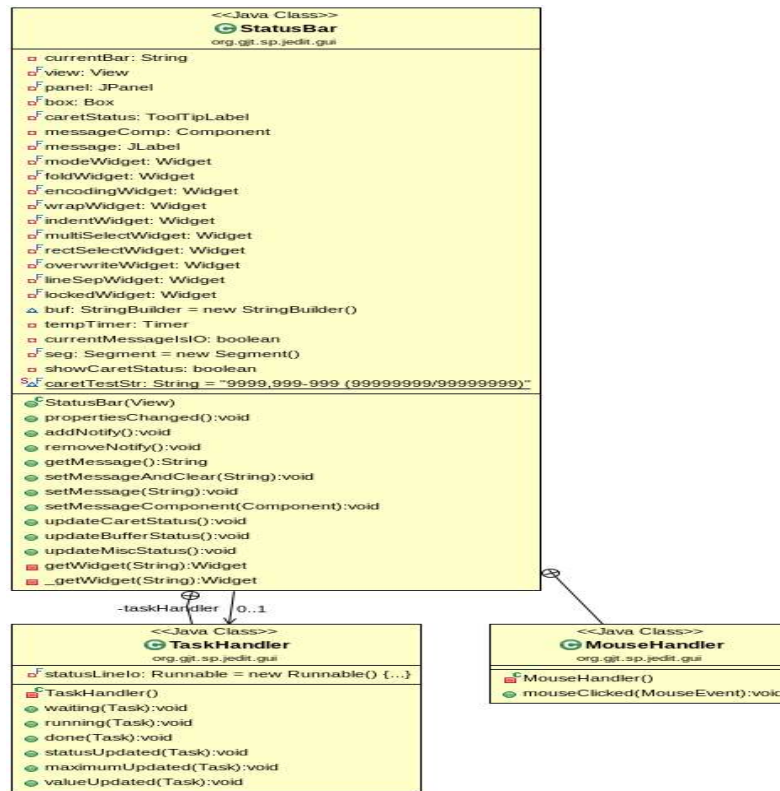
7 Timing

Summarize the time spent on each phase.

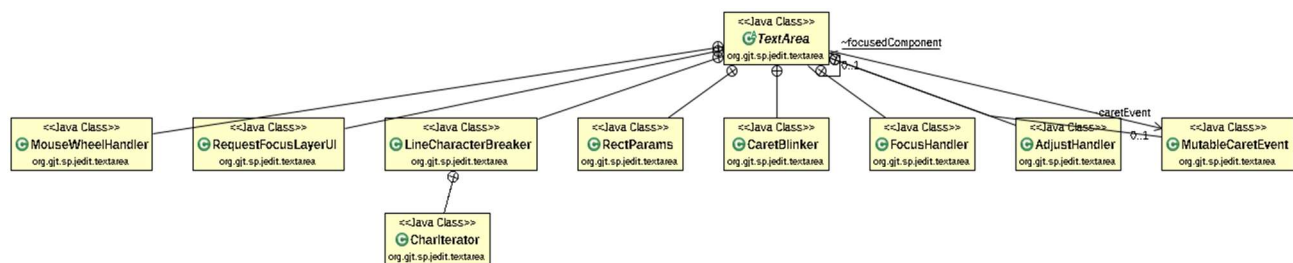
Phase Name	Time (in minutes)
Concept location	30
Impact Analysis	30
Prefactoring	-
Actualization	45
Postfactoring	-
Verification	15
Total	120

8 UML sequence diagram for the visited classes

UML Diagram for Status Bar:



UML Diagram for TextArea:



9 Conclusions

For this change request, concept location was relatively easy because the module we have to modify was relatively small, and its architecture and code are not complicated. Concept location, impact analysis, and actualization were very useful throughout the process. Testing was performed by different test use cases.

Classes and methods changed:

- org/gjt/sp/jedit/textarea/TextArea.java
 - *Void getCaretWord()*
 - *Void getWordCount()*
- org/jedit/localization/jedit en.props
- org/gjt/sp/jedit/gui/StatusBar.java
 - *Void UpdateCaretStatus()*

Github Link: <https://github.com/prashantkthakur/cs515-s19-a2-BugHunters-jedit550>