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Project: jEdit
Change Number: 2
Date: 04/01/2018

Zoom the text editor

1.   Change Request:

For this change request we first needed to add two items to the "View" dropdown menu. The two items, "zoom+" and "zoom-", required the functionality of zooming in and out on the text editor. It should be noted that the view should be able to be scaled multiple times.

2.   Concept Location:

Table 1. The list of all the classes visited during concept location.

#	File name	Tool used	Located?	Comments
1	org.gjt.sp.jedit /actions.xml	Eclipse Search Tool	**Changed**	This is where we added the zoom-plus and zoom-minus action
2	org.gjt.sp.jedit /jedit_gui.props	Eclipse Search Tool	**Changed**	Added the zoom-plus and zoom-minus action to the GUI
3	org.gjt.sp.jedit /BeanShell.java	Eclipse Search Tool	**Propagating**	Here we found runScripts which lead us to Increase_Font_size.bsh and Decrease_Font_size.bsh
4	macros.Interface/Increase_ Font_size.bsh	Eclipse Search Tool	**Unchanged**	Looked into using this script to increase font size
5	macros.Interface/Decrease _Font_size.bsh	Eclipse Search Tool	**Unchanged**	Looked into using this script to decrease font size
6	org.gjt.sp.jedit .textarea/TextArea.java	Eclipse Search Tool	**Changed**	The action for zoom-plus or minus calls their corresponding function in TextArea.java. Functions are similar to the implementations found in Increase_Font_size.bsh and Decrease_Font_size.bsh

3. Impact Analysis:

Table 2. The list of all the classes visited during impact analysis.

#	Class name	Tool used	Impacted?	Comments
1	org.gjt.sp.jedit/ jedit_gui.props	Eclipse Search Tool	TextArea, actions.xml	This file is used to link actions to the jEdit GUI
2	org.gjt.sp.jedit. textarea/TextArea.java	Eclipse Search Tool	AdjustHandler, RectParams, CaretBlinker, MutableCaret Event, MouseWheel Handler, FocusHandler	This class contains every related with the text input area in jEdit (which is a lot of code, ~ 6000 lines!)
3	org.gjt.sp.jedit/ actions.xml	Eclipse Search Tool	jedit_gui.props	This class adds functionality to GUI items in jEdit

4. Learning process:

See changeRequest2_UML.png (Image was too large to include in this document)

5. Description of the implementation:

We added the props in jedit_gui.props so that we could see the options in the jedit. Then we linked them some functionality in actions.xml which called functions that we implemented in TextArea.java. The TextArea.java functions zoomPlus and zoomMinus are copy pastes of Increase_Font_size.bsh and Decrease_Font_size.bsh as calling the beanshellscripts wasn't working properly with the implementation that we tried, so we settled on this.

6. Sources: jEdit, Eclipse, GitHub, ObjectAid UML Diagram (Eclipse Add-on)

7. Highlighted Source Code:

actions.xml

12 ▪▪▪▪▪ assignment 3/JEdit 4.3/org/gjt/sp/jedit/actions.xml

```
@@ -1363,4 +1363,16 @@
1363  1363              </CODE>
1364  1364          </ACTION>
1365  1365
      1366  +<ACTION NAME="zoom-plus">
      1367  +    <CODE>
      1368  +            textArea.zoomPlus();
      1369  +    </CODE>
      1370  +</ACTION>
      1371  +
      1372  +<ACTION NAME="zoom-minus">
      1373  +    <CODE>
      1374  +            textArea.zoomMinus();
      1375  +    </CODE>
      1376  +</ACTION>
      1377  +
1366  1378      </ACTIONS>
```

jedit_gui.props

7 ▪▪▪▪ assignment 3/JEdit 4.3/org/gjt/sp/jedit/jedit_gui.props

```
@@ -482,7 +482,10 @@ view=new-view \
482  482        - \
483  483        %scrolling \
484  484        %splitting \
485       -    %docking
     485  +    %docking \
     486  +    - \
     487  +    zoom-plus \
     488  +    zoom-minus \
486  489  view.label=$View
487  490  new-view.label=New $View
488  491  new-plain-view.label=Ne$w Plain View
```

```
@@ -492,6 +495,8 @@ next-buffer.label=Go to $Next Buffer
492  495  recent-buffer.label=Go to $Recent Buffer
493  496  show-buffer-switcher.label=Show $Buffer Switcher
494  497  toggle-line-numbers.label=$Line Numbers
     498  +zoom-plus.label=$Zoom+
     499  +zoom-minus.label=$Zoom-
495  500
496  501  #{{{ Scrolling menu
497  502  scrolling=scroll-to-current-line \
```

TextArea.java

View ⌄

```
@@ -34,6 +34,7 @@
34    34    import org.gjt.sp.jedit.buffer.JEditBuffer;
35    35    import org.gjt.sp.jedit.Debug;
36    36    import org.gjt.sp.jedit.TextUtilities;
      37  + import org.gjt.sp.jedit.jEdit;
37    38    import org.gjt.sp.util.Log;
38    39    import org.gjt.sp.util.StandardUtilities;
39    40
```

```
@@ -4795,7 +4796,39 @@ public boolean isSelectionRectangular()
4795  4796          } //}}}
4796  4797
4797  4798          //}}}
      4799  +
      4800  +        /**
      4801  +         * Zooms in on the text area
      4802  +         * @author Wynston, Evan, Darvin
      4803  +         */
      4804  +        public void zoomPlus() {
      4805  +                String FONT_SIZE = "view.fontsize";
      4806  +                String GUTTER_FONT_SIZE = "view.gutter.fontsize";
      4807  +                String CONSOLE_FONT_SIZE = "console.fontsize";
      4808  +                Integer size = jEdit.getIntegerProperty(FONT_SIZE,12) + 1;
      4809  +                jEdit.setIntegerProperty(FONT_SIZE,size);
      4810  +                jEdit.setIntegerProperty(GUTTER_FONT_SIZE,size);
      4811  +                jEdit.setIntegerProperty(CONSOLE_FONT_SIZE,size);
      4812  +                jEdit.propertiesChanged();
      4813  +                jEdit.saveSettings();
      4814  +        }
4798  4815
      4816  +        /**
      4817  +         * Zooms out on the text area
      4818  +         * @author Wynston, Evan, Darvin
      4819  +         */
      4820  +        public void zoomMinus() {
      4821  +                String FONT_SIZE = "view.fontsize";
      4822  +                String GUTTER_FONT_SIZE = "view.gutter.fontsize";
      4823  +                String CONSOLE_FONT_SIZE = "console.fontsize";
      4824  +                Integer size = jEdit.getIntegerProperty(FONT_SIZE,12) - 1;
      4825  +                jEdit.setIntegerProperty(FONT_SIZE,size);
      4826  +                jEdit.setIntegerProperty(GUTTER_FONT_SIZE,size);
      4827  +                jEdit.setIntegerProperty(CONSOLE_FONT_SIZE,size);
      4828  +                jEdit.propertiesChanged();
      4829  +                jEdit.saveSettings();
      4830  +        }
      4831  +
4799  4832          //{{{ Package-private members
4800  4833
4801  4834          static TextArea focusedComponent;
```