1 Diff Function

CCX has the ability to compare and display the results of two different code clone detections for the same set of source code. This document describes how to use this feature.

1.1 Input Selection Screen

The input selection screen is displayed by clicking the three-line mark in the upper left corner and selecting Diff with the project selected. The screen is shown in Figure1, and the two detection results to be compared are selected on this screen.

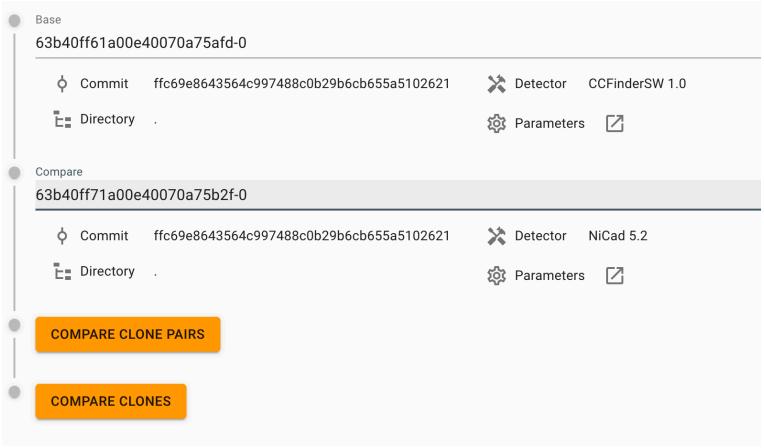

図 1: Input Selection Screen

Select the detection results to be used as the basis for comparison in the upper Base selection column and the results to be compared in the lower Comparing selection column. Selecting the COMPARE CLONEPAIRS button compares each clone pair, and a scatterplot and CodeView are displayed. Selecting the COMPARE CLONES button compares each code clone and displays the resulting graph and ClonseSetView. Since other documents have already described the scatterplot display, this document describes the functionality when the COMPARE CLONES button is clicked.

1.2 Display Screen

The graphs and CloneSetView displayed are Figure2.

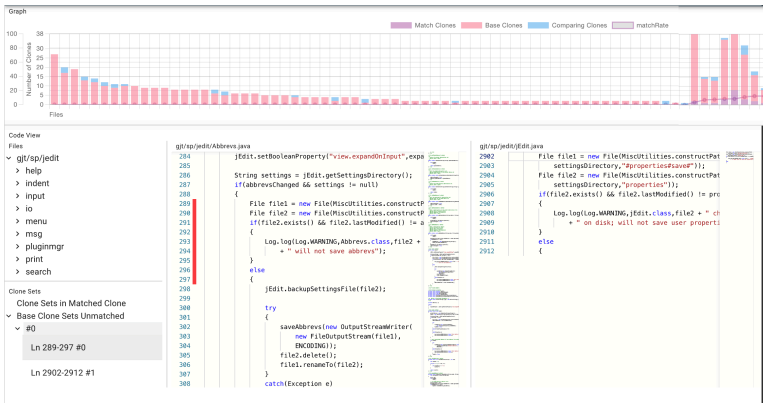

図 2: Display Screen

The horizontal axis of the graphs is lined with files, and the values in each graph are per-file values. The vertical axis of the stacked bar graph is the number of code clones detected in each file as a result of comparing the detection results. The stacked bar graph consists of three bars: red, blue, and purple, where purple represents the number of matched code clones, red represents the number of code clones that did not match in the first detection result, and blue represents the number of code clones that did not match in the second detection result. And, the maximum value of the vertical axis of the stacked bar graph is set to the average number of code clones detected in each file plus 30. Therefore, the value of the stacked bar graph that is not shown at the maximum value is greater than or equal to the maximum value, and the actual value can be confirmed by hovering the mouse over it. Also, the vertical axis of the line graph is the percentage of agreement between the first and second detection results. These composite graphs are sorted in order of decreasing agreement between the first and second detection results, and the stacked bar graphs are sorted from the file with the highest value if the agreement is the same.

The CloneSetView is displayed at the bottom of Figure 2. This CloneSetView allows the user to view the clone set of code clones detected by the two detection tools, file by file. This CloneSetView consists of four panes. The role of each pane is shown in the table 1. The relationship between the panes is shown in Figure3.

表 1: Role of each pane of CloneSetView

pane	name	role
a	File Tree	Files with code clones detected in the two detection results are displayed in path order
b	Clone List	Displays the clone set of code clones found in the selected file
c	Source Code View	Displays the source code of the selected file
d	Clone Pair View	Display clone pairs and their file paths for e code clones highlighted in pane c

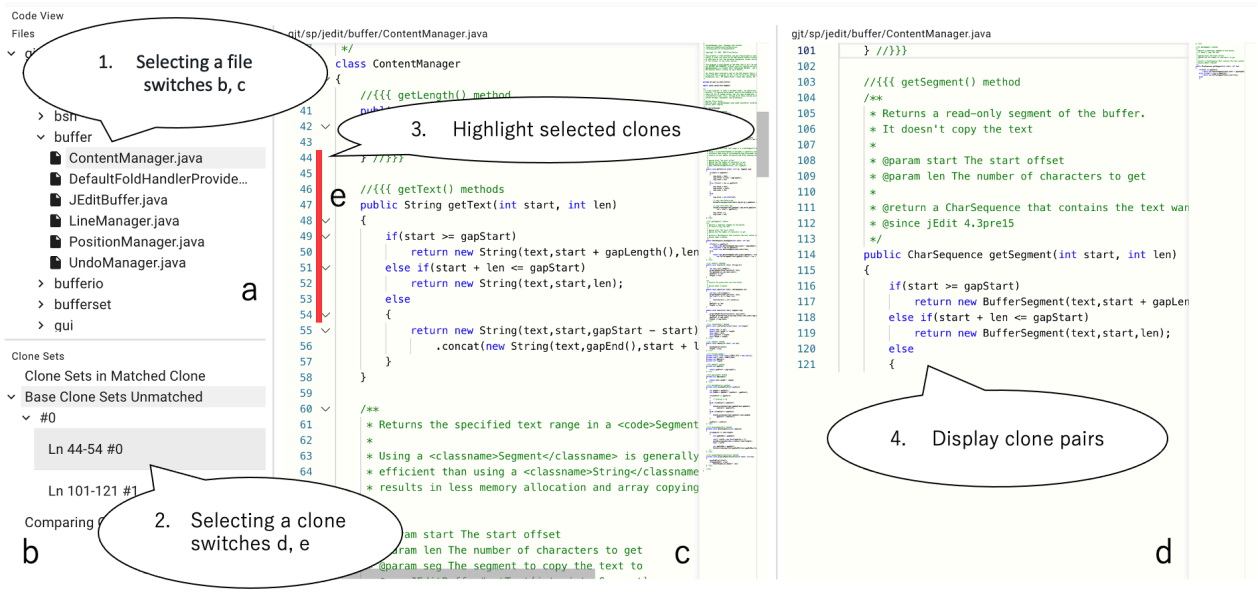

図 3: Relationship between each pane