An "ideal" testing strategy

Given additional time and resources, our testing strategy would ideally consist of two main components:

1. Verification:
    a. Unit testing: A comprehensive suite of QUnit test cases for our javascript backend core. The core connects our app's UI to the Zotero API so we would need to ensure that these backend functions are functioning properly. We would take a white-box testing approach when building unit tests for our core since we know that the Zotero API functions have already been tested. We would test the new features that are introduced by our plugin.
        i. Testing scope: Test valid parameters, Test invalid parameters, Test edge cases eg empty parameters, etc
    b. Actual testing: We would compile a set of actual real world tests that a user can complete following a set of instructions by accessing the UI.
        i. Testing scope: Test all features with standard input, Test all features with no input, and Test all features from an attacker's point of view to attempt to crash the plugin.
2. Validation:
    a. Regular meetings with Natalie: At the end of every sprint, we would visit Natalie (the customer) and show her the newly added features of the plugin since the last meeting. This way we can consistently get validation feedback to ensure we are building the plugin in line with her specifications.

Actual testing strategy

How to open 'Batch edit tags':

1) Open Zotero
2) Click Gear menu 
3) Click 'Zotero EXTended' -> 'Batch edit tags..'

How to open 'Batch edit tags':

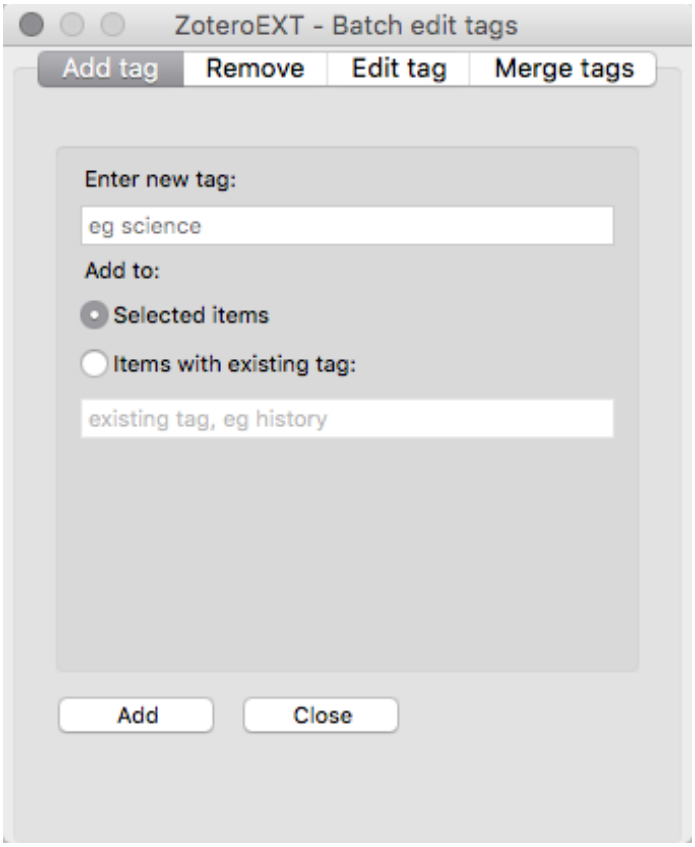
1) Open Zotero
2) Click Gear menu 
3) Click 'Zotero EXTended' -> 'Custom output styles..'

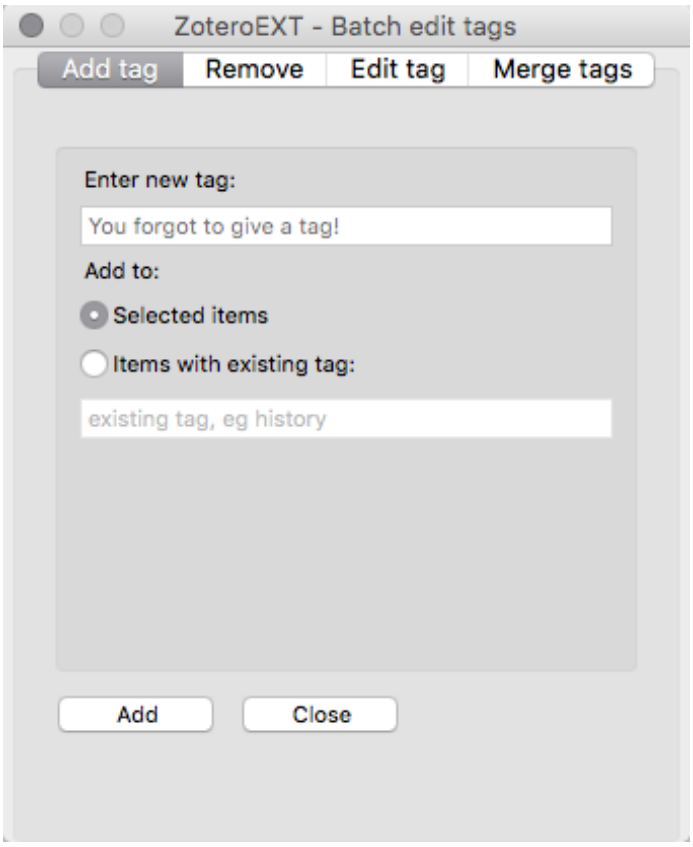
We put snapshots for some of our test cases for examples.

For Batch edit tags:

Test case 1) Add no tag.

- Expected result: The message in the textbox for a new tag is changed from 'eg science' to 'You forgot to give a tag!'
- Actual result: the same result as expected result.



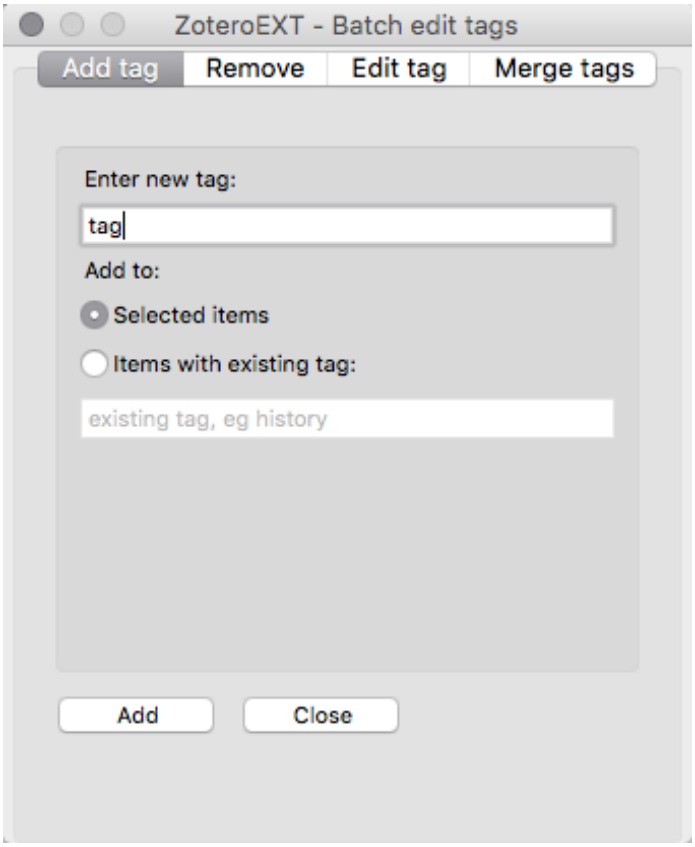


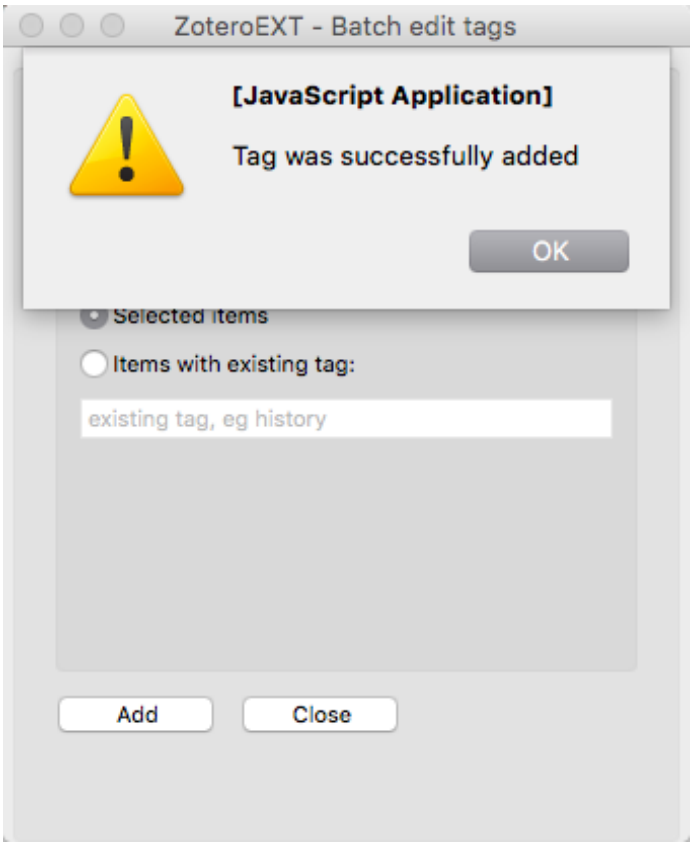
Test case 2) Add a single tag to selected items (no items selected)

- Expected result: A pop-up window shows up with 'No items selected' message.
- Actual result: the same result as expected result.

Test case 3) Add a single tag to selected items (one item selected)

- Expected result: A pop-up window shows up with 'Tag was successfully added' message.
- Actual result: the same result as expected result.





Test case 4) Add a single tag to selected items (many items selected)

- Expected result: A pop-up window shows up with 'Tag was successfully added' message.
- Actual result: the same result as expected result.

Test case 5) Add a single tag to items with existing tag. (no existing tag)

- Expected result: A pop-up window shows up with 'No items selected' message.
- Actual result: the same result as expected result.

Test case 6) Add a single tag to items with existing tag. (existing tag)

- Expected result: A pop-up window shows up with 'Tag was successfully added' message.
- Actual result: the same result as expected result.

Test case 7) Add a single tag that already exists.

- Expected result: A pop-up window shows up with 'Tag was successfully added' message.
  But it does not add another tag with the same name.
- Actual result: the same result as expected result.

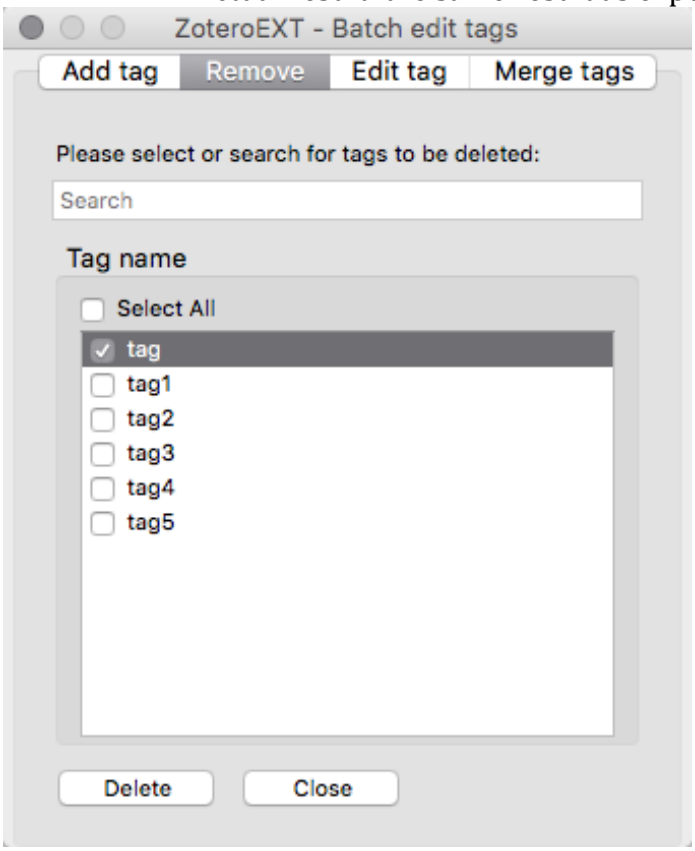
Test case 8) Remove no items.

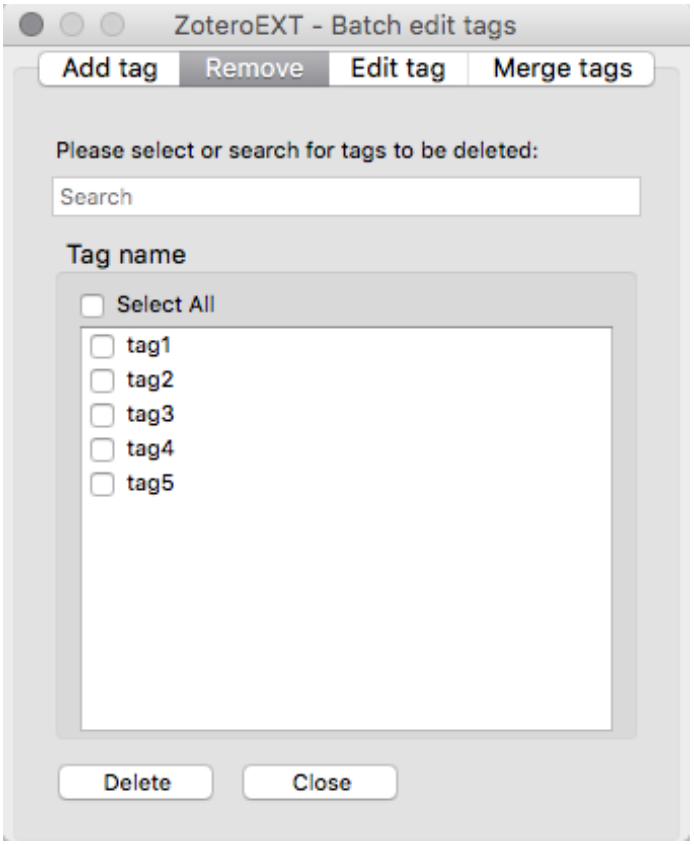
- Expected result: It does nothing.
- Actual result: the same result as expected result.

Test case 9) Remove a single tag by checking a box.

- Expected result: It removes the tag that is checked.

- Actual result: the same result as expected result.



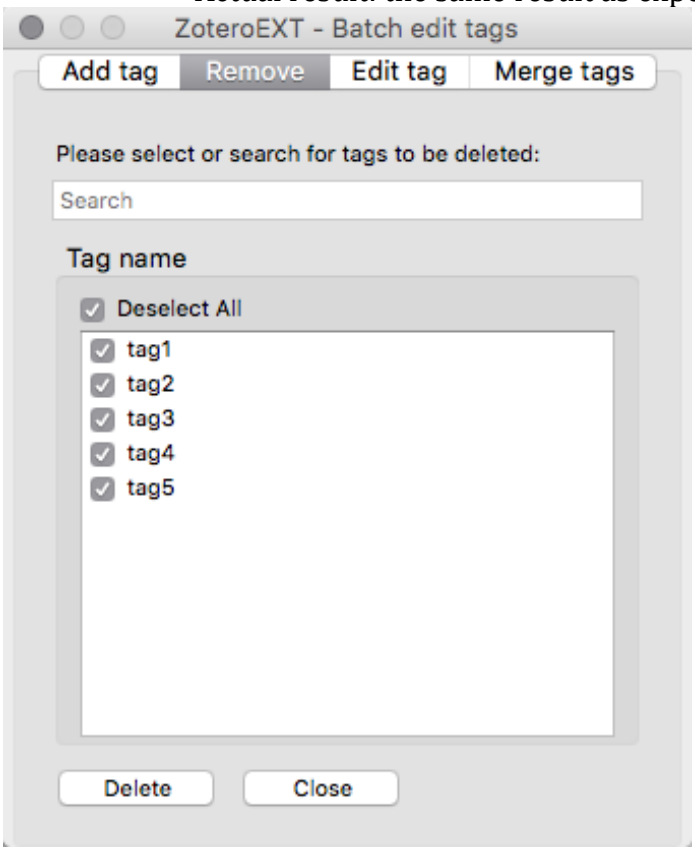


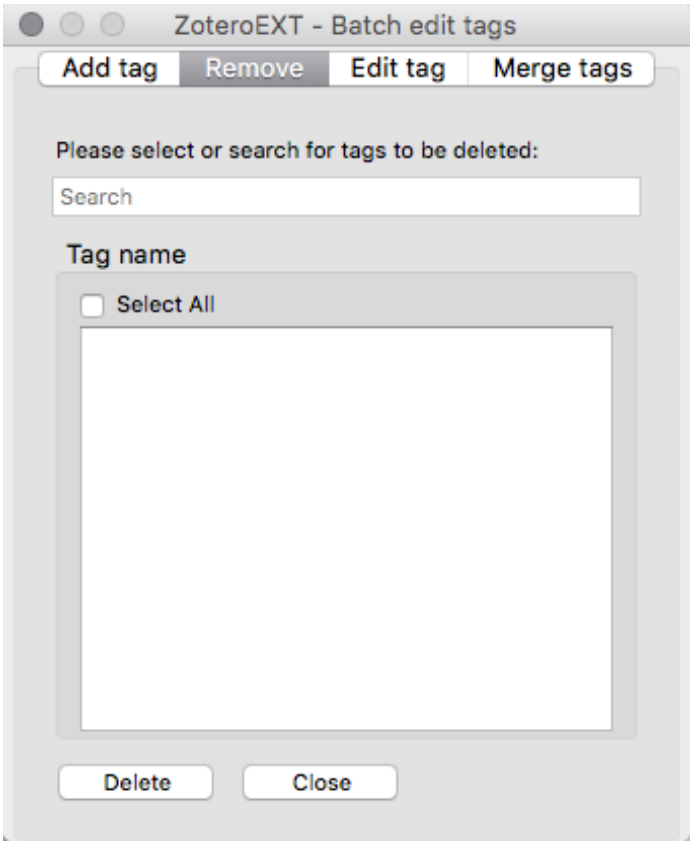
Test case 10) Remove several tags by checking boxes.

- Expected result: It removes the tags that are checked.
- Actual result: the same result as expected result.

Test case 11) Remove all tags by checking 'Select All' box.

- Expected result: It removes all the tags.
- Actual result: the same result as expected result.





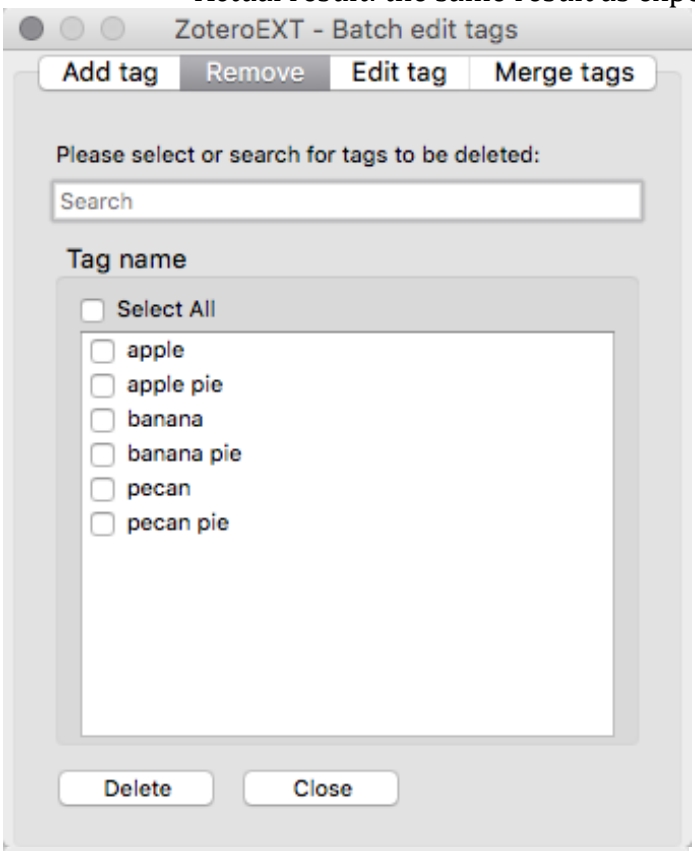
Test case 12) Search a tag using search box, and remove a single tag that is searched.

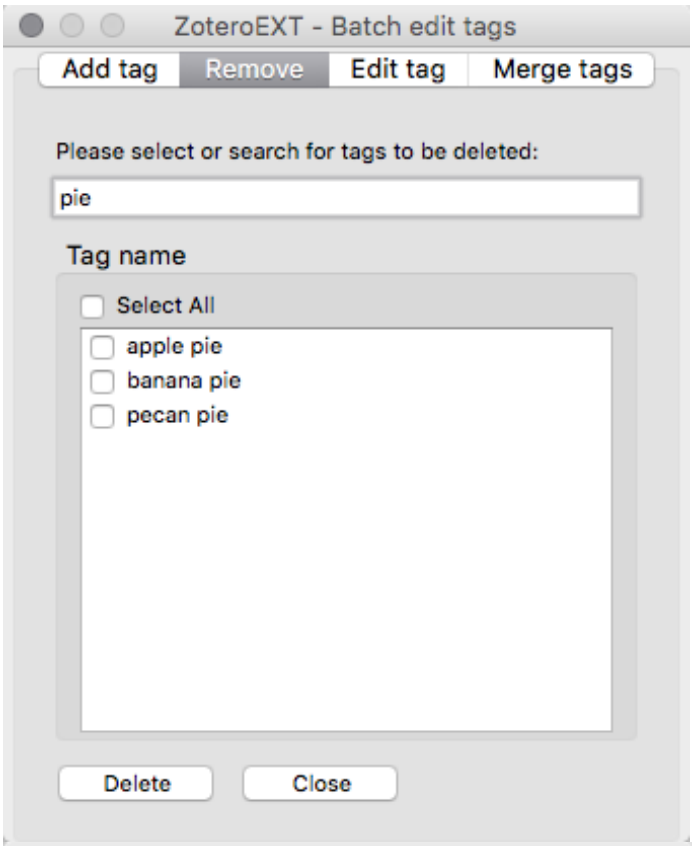
- Expected result: It removes the tag that is searched and checked.

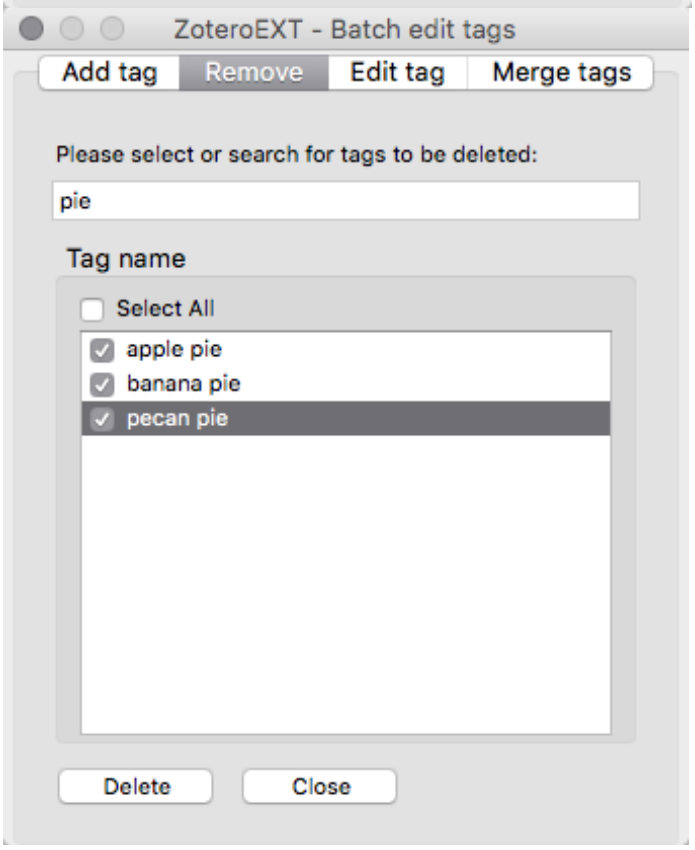
- Actual result: the same result as expected result.

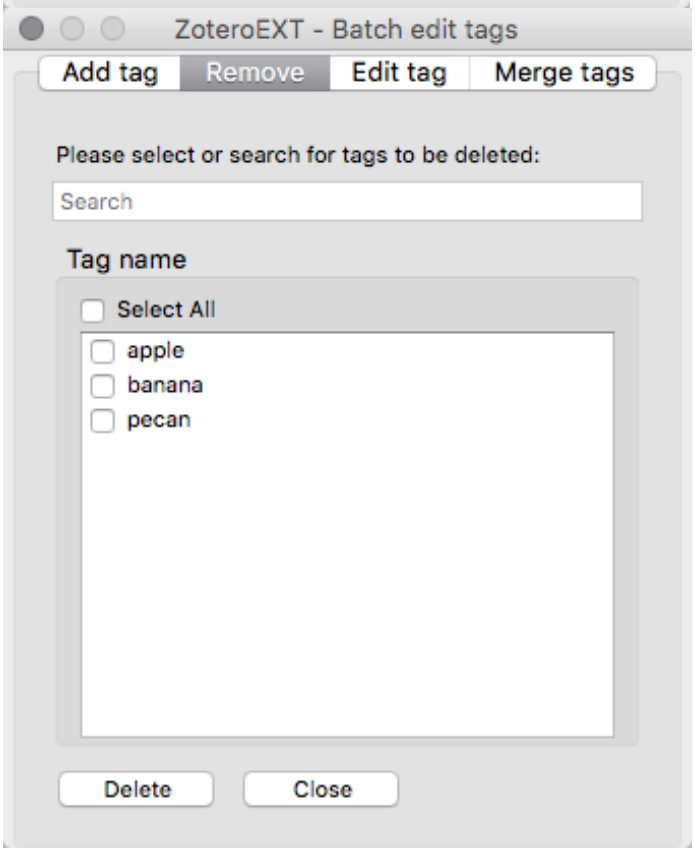
Test case 13) Search a tag using search box, and remove several tags that are searched.

- Expected result: It removes the tags that are searched and checked.
- Actual result: the same result as expected result.







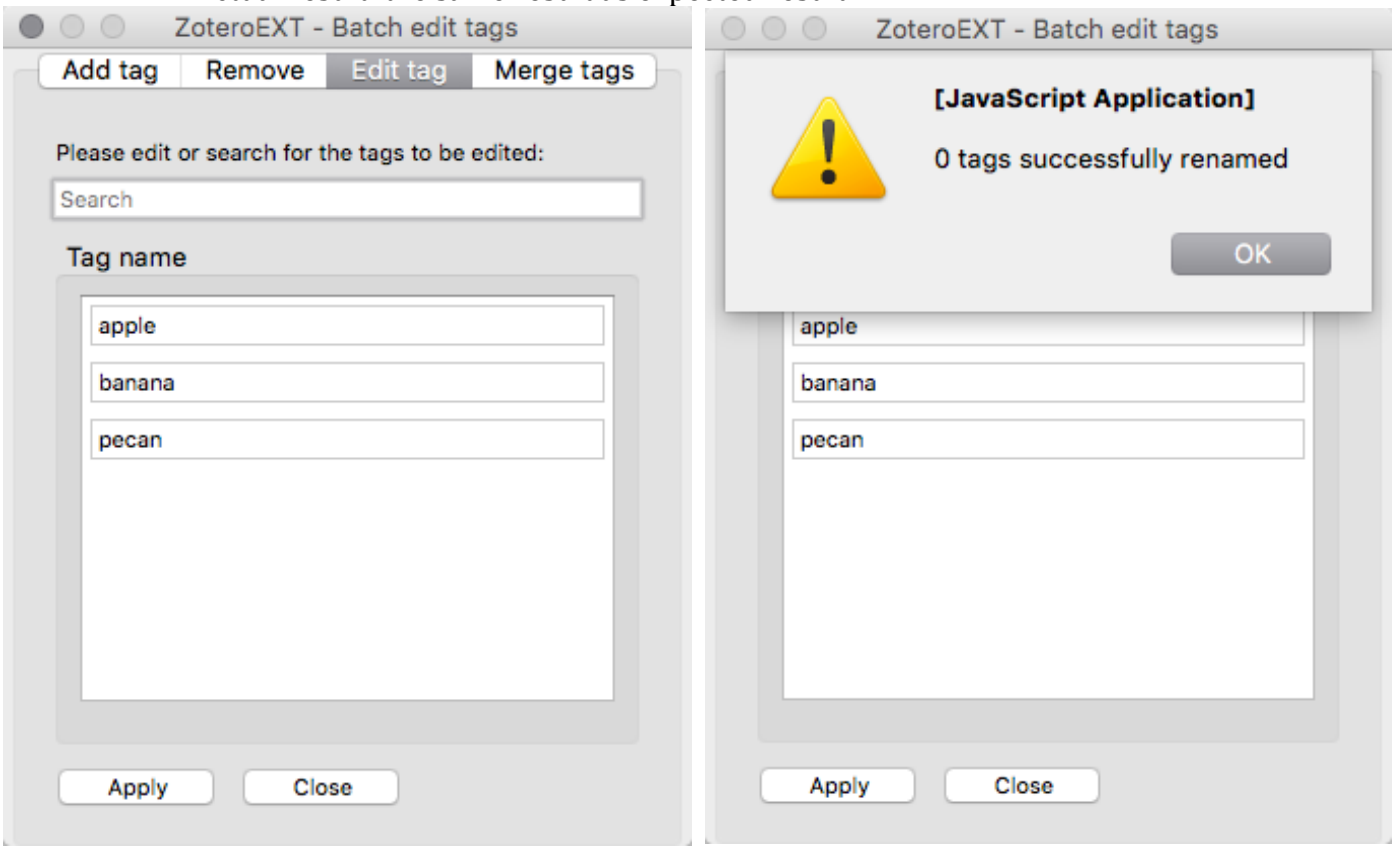


Test case 14) Search a tag using search box, and remove all tags that are searched using ‘Select All’.

- Expected result: It removes all the tags that are searched and selected.
- Actual result: the same result as expected result.

Test case 15) Edit no tags.

- Expected result: A pop-up window shows up with '0 tags successfully renamed' message.
- Actual result: the same result as expected result.



Test case 16) Edit a single tag from the list.

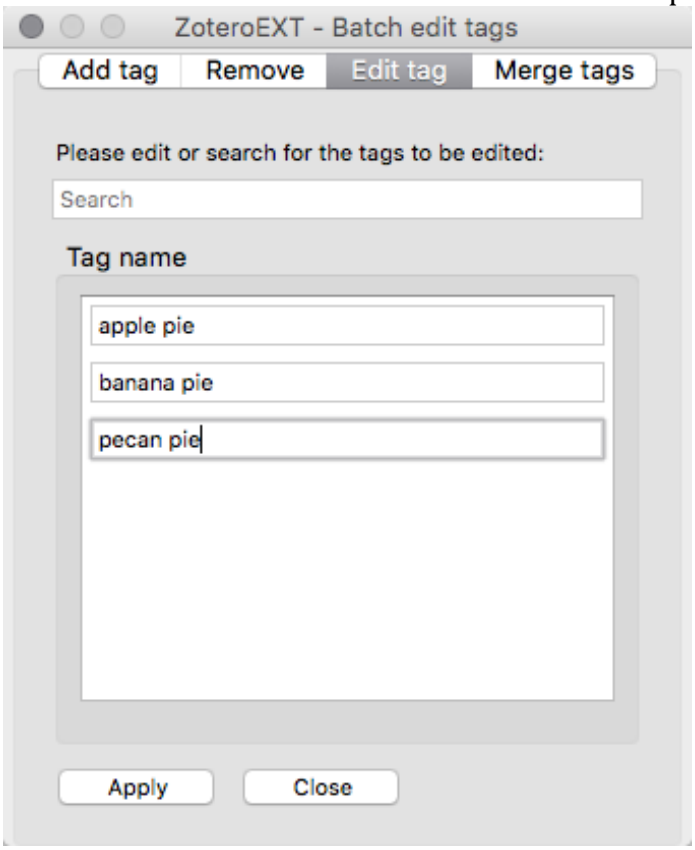
- Expected result: A pop-up window shows up with '1 tags successfully renamed' message.
- Actual result: the same result as expected result.

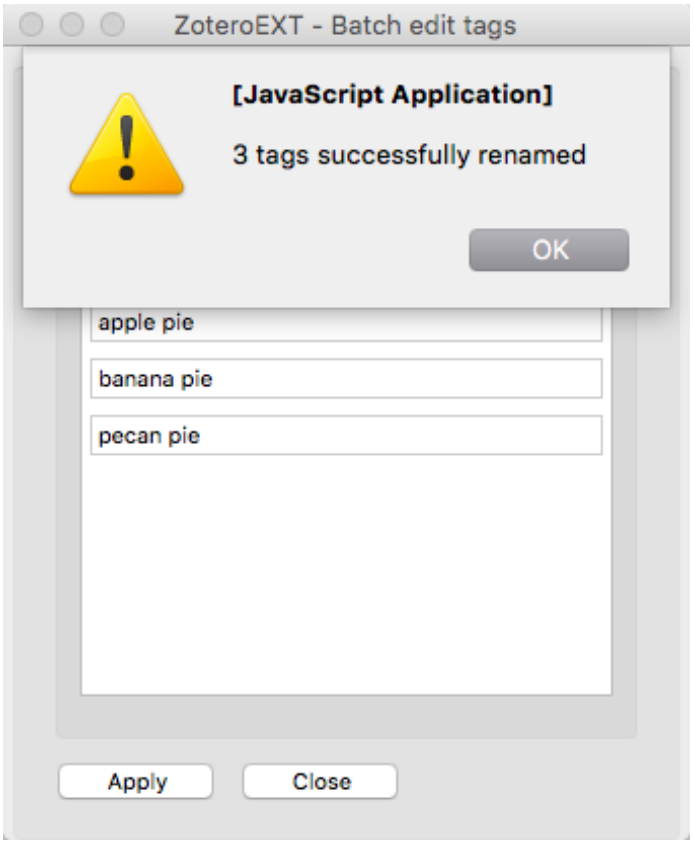
Test case 17) Edit several tags from the list.

- Expected result: A pop-up window shows up with 'n tags successfully renamed'

message. (where n is the number of the tags that are renamed)

- Actual result: the same result as expected result.





Test case 18) Search a tag and edit a single tag that is searched.

- Expected result: A pop-up window shows up with '1 tags successfully renamed' message.
- Actual result: the same result as expected result.

Test case 19) Search a tag and edit several tags that are searched.

- Expected result: A pop-up window shows up with 'n tags successfully renamed' message. (where n is the number of tags that are renamed)
- Actual result: the same result as expected result.

Test case 20) Merge no tags.

- Expected result: It does nothing.
- Actual result: the same result as expected result.

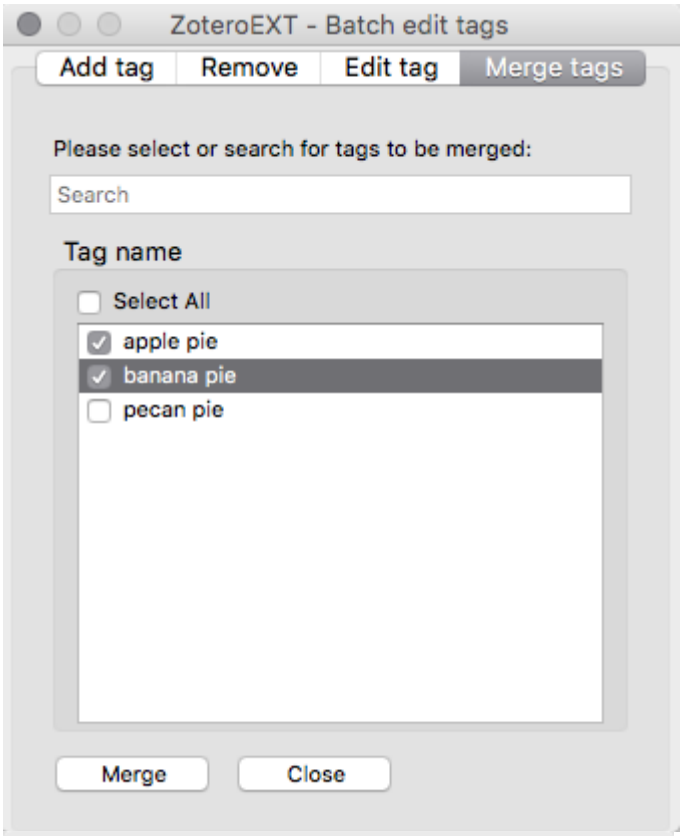
Test case 21) Merge two tags into an existing tag.

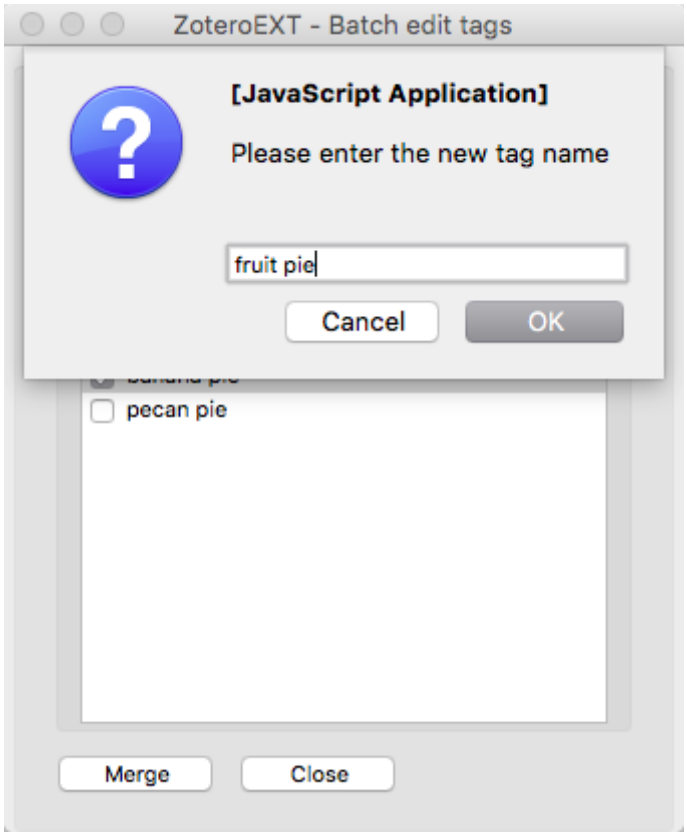
- Expected result: It merges two tags into an existing tag.
- Actual result: the same result as expected result.

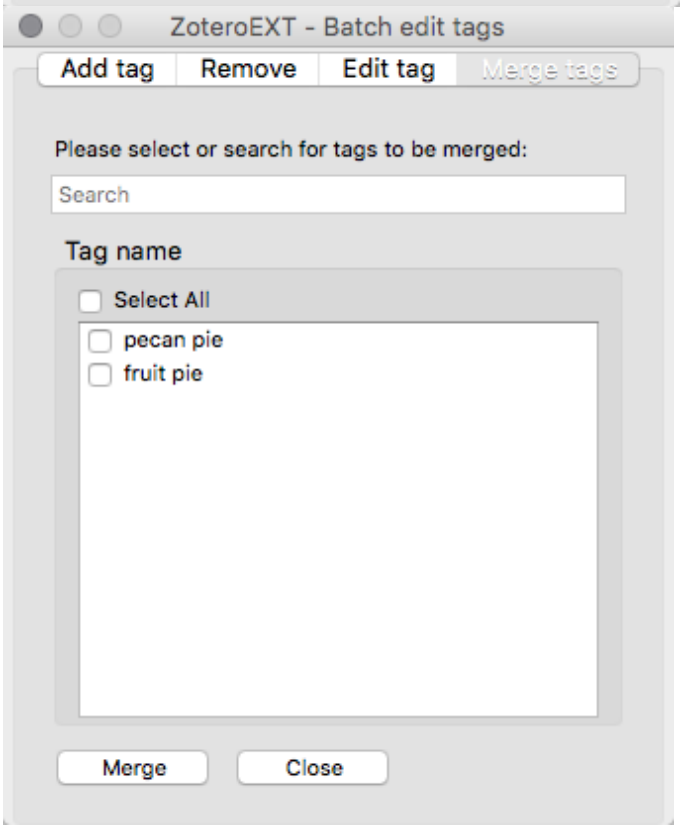
Test case 22) Merge two tags into a new tag.

- Expected result: It merge two tags into the new tag.

- Actual result: the same result as expected result.







Test case 23) Merge several tags into a new tag.

- Expected result: It merges several tags into the new tag.

- Actual result: the same result as expected result.

Test case 24) Merge several tags into an existing tag.
- Expected result: It merges several tags into the existing tag.
- Actual result: the same result as expected result.

Test case 25) Search a tag and merge two tags into a new tag.
- Expected result: It merges the tags that are searched into the new tag.
- Actual result: the same result as expected result.

Test case 26) Search a tag and merge two tags into an existing tag.
- Expected result: It merges the tags that are searched into the existing tag.
- Actual result: the same result as expected result.

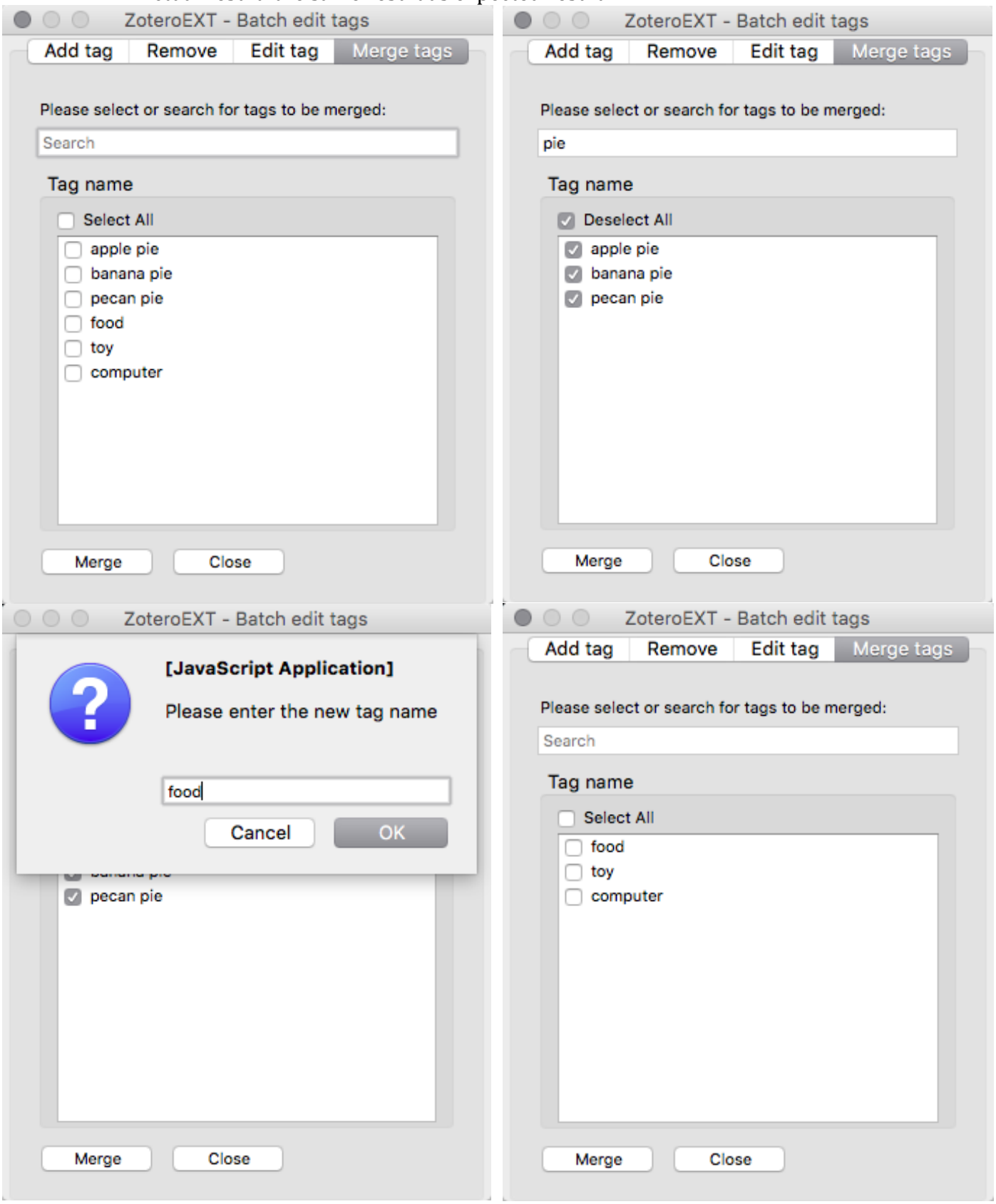
Test case 27) Search a tag and merge all searched tags into a new tag by checking 'Select All'
- Expected result: It merges all the tags that are searched into the new tag.
- Actual result: the same result as expected result.

Test case 28) Search a tag and merge all searched tags into an existing tag by checking 'Select All' box.
- Expected result: It merges all the tags that are searched into the existing tag.
- Actual result: the same result as expected result.

Test case 29) Search a tag and merge several tags into a new tag.
- Expected result: It merges the tags that are searched into the new tag.
- Actual result: the same result as expected result.

Test case 30) Search a tag and merge several tags into an existing tag.
- Expected result: It merges the tags that are searched into the existing tag.

- Actual result: the same result as expected result.



For Custom output styles:

Test case 1) Click ‘About’, ‘Search by name’, ‘Search by example’, ‘Visual editor’, or ‘Code

editor' to check those tabs are working.

- Expected result: It shows different pages by clicking different tabs.
- Actual result: the same result as expected result.

Test case 2) Search a style from 'Search by example'.

- Expected result: It shows the first example style.
- Actual result: the same result as expected result.

Test case 3) Click 'Next' to view the next example from 'Search by example'.

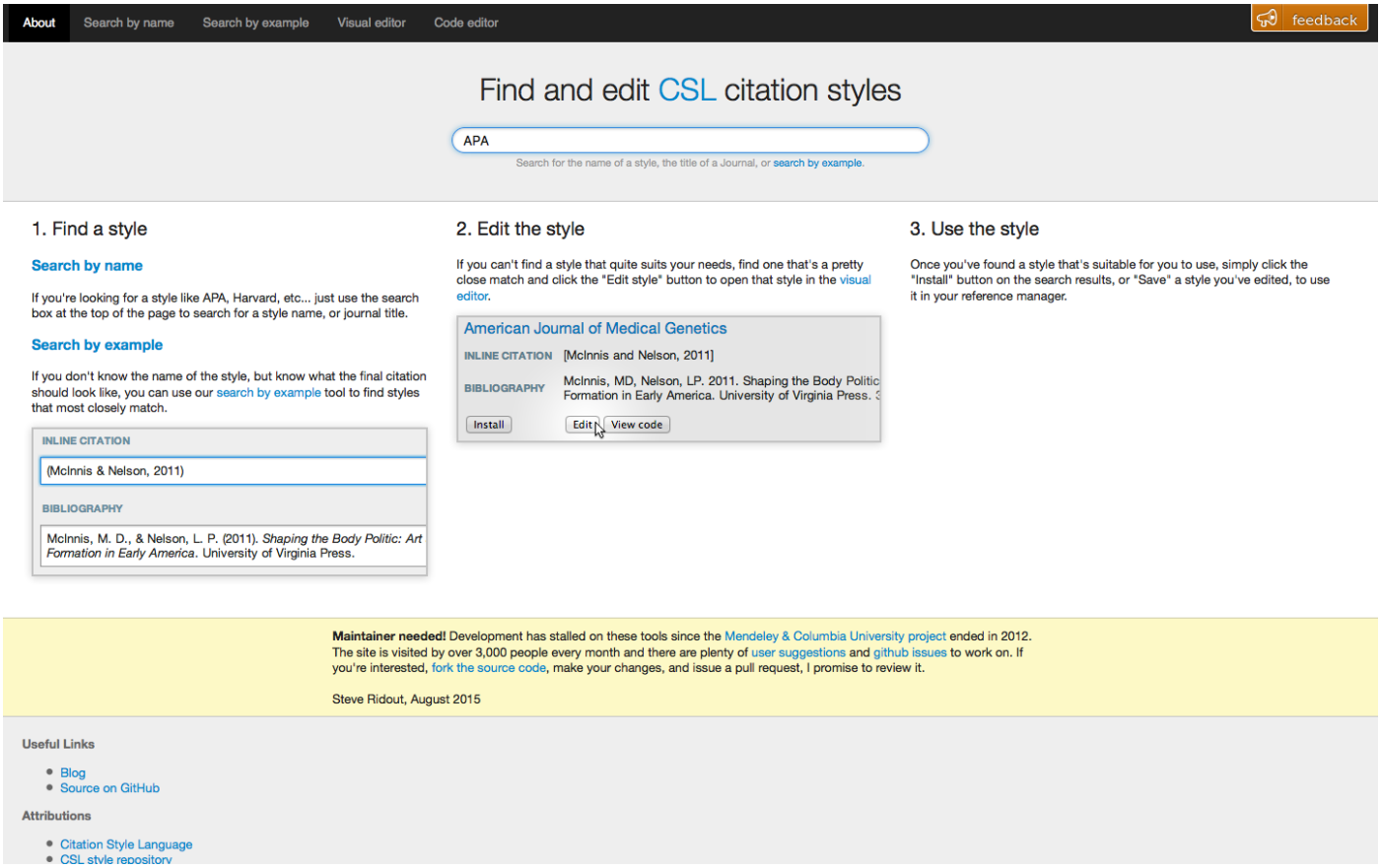
- Expected result: It shows the next example style.
- Actual result: the same result as expected result.

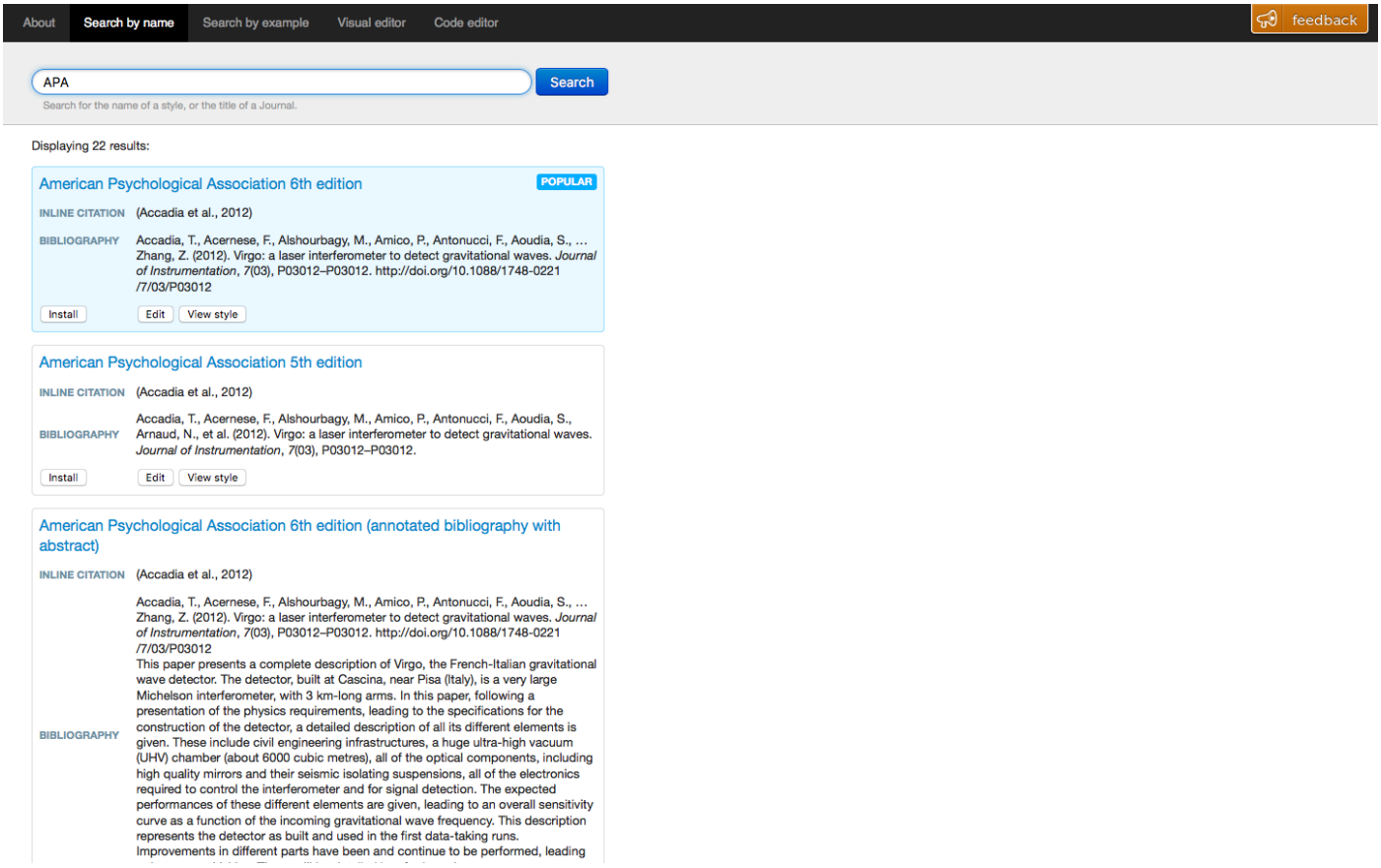
Test case 4) Click 'Previous' to view the previous example from 'Search by example'.

- Expected result: It shows the previous example style.
- Actual result: the same result as expected result.

Test case 5) Search a style (for example, 'APA') from 'About' or 'Search by name'.

- Expected result: It shows 'APA' styles.
- Actual result: the same result as expected result.



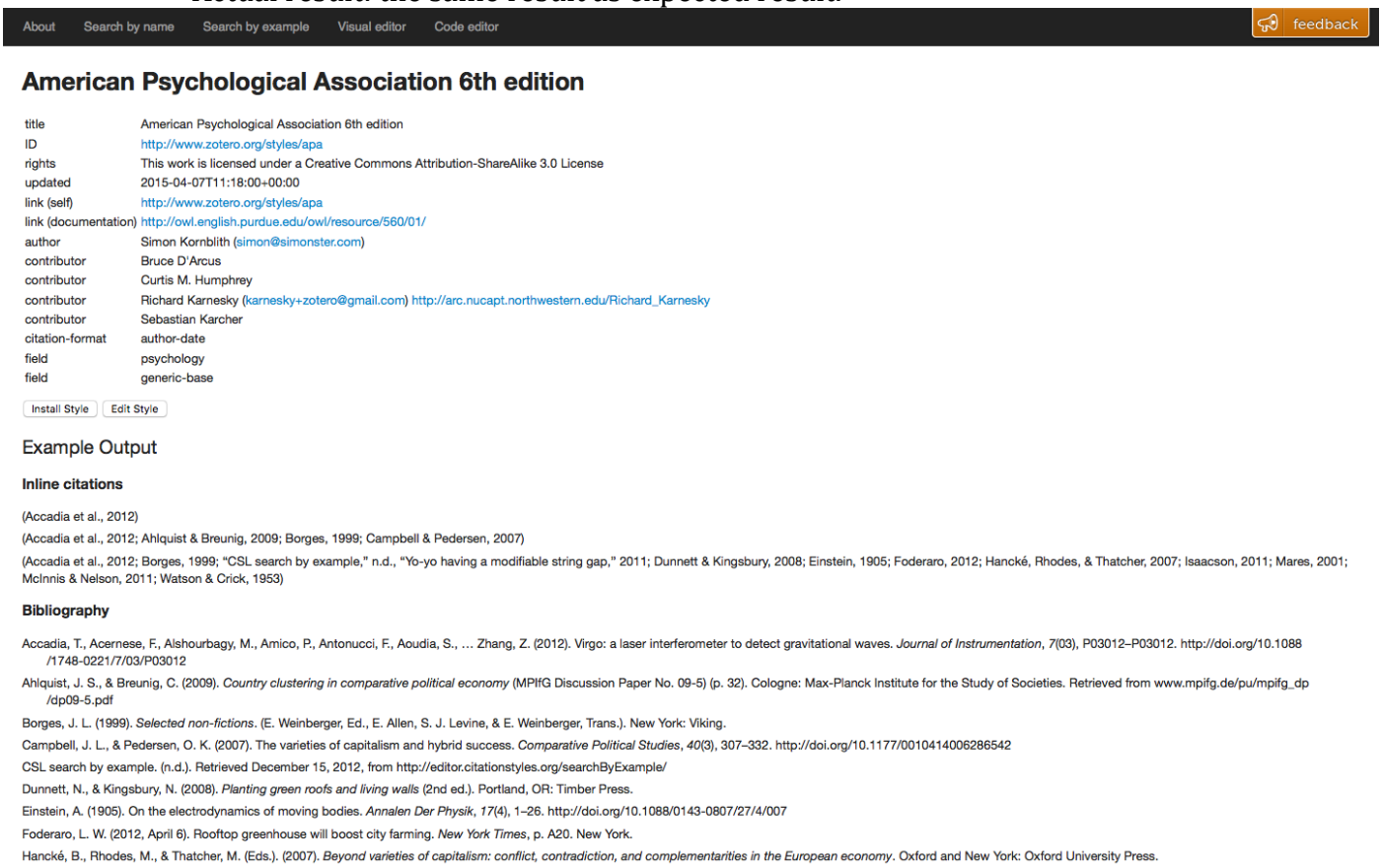


Test case 6) Click the title of the style to see the detail (after search a style).

- Expected result: It shows detail of the style.
- Actual result: the same result as expected result.

Test case 7) Click 'View style' button to see the detail (after search a style).

- Expected result: It shows detail of the style.
- Actual result: the same result as expected result.

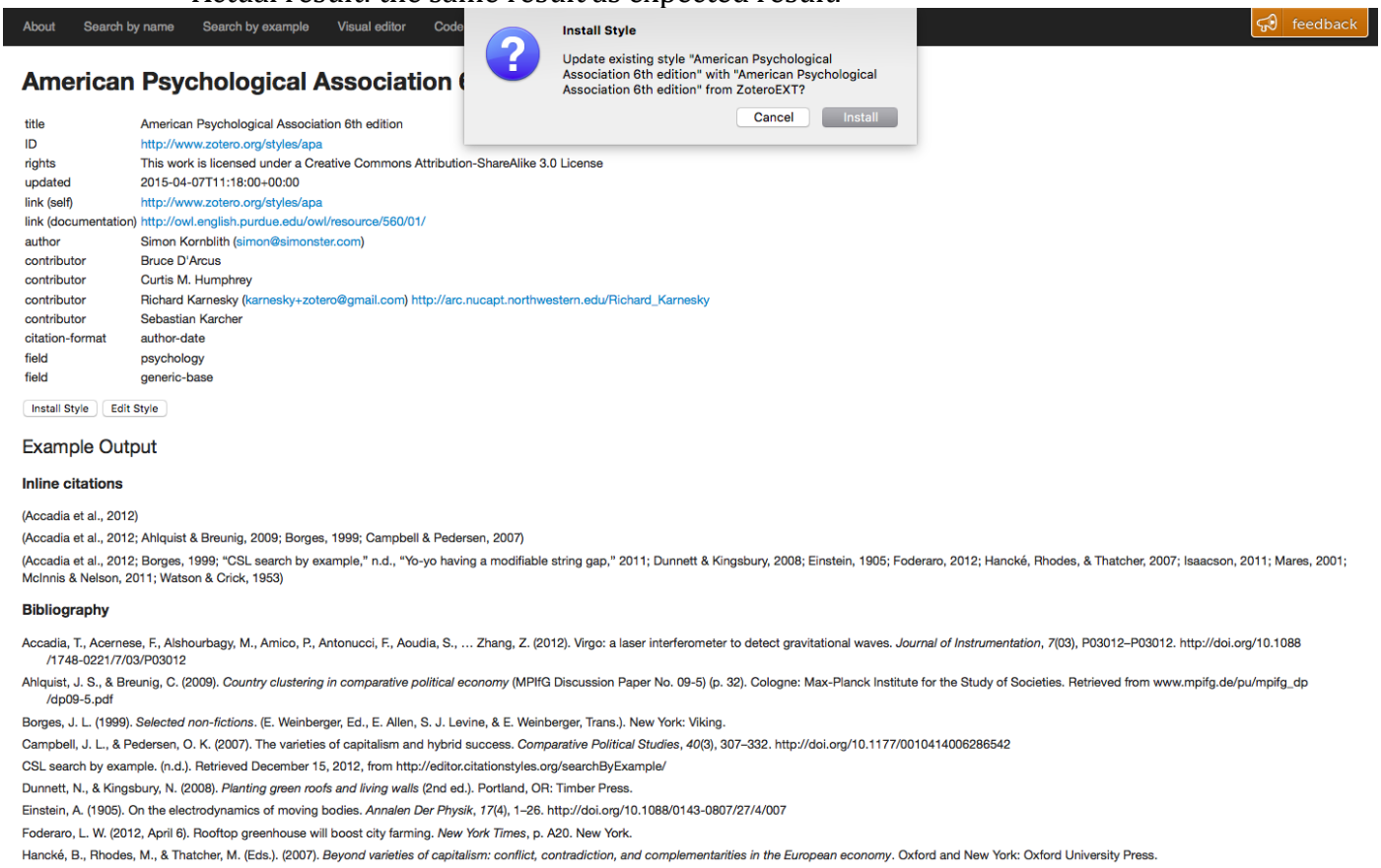


Test case 8) Install a new style by clicking 'Install' button (after search a style).

- Expected result: It installs the new style.
- Actual result: the same result as expected result.

Test case 9) Install an existing style by clicking 'Install' button (after search a style).

- Expected result: It updates/replace the existing style.
- Actual result: the same result as expected result.

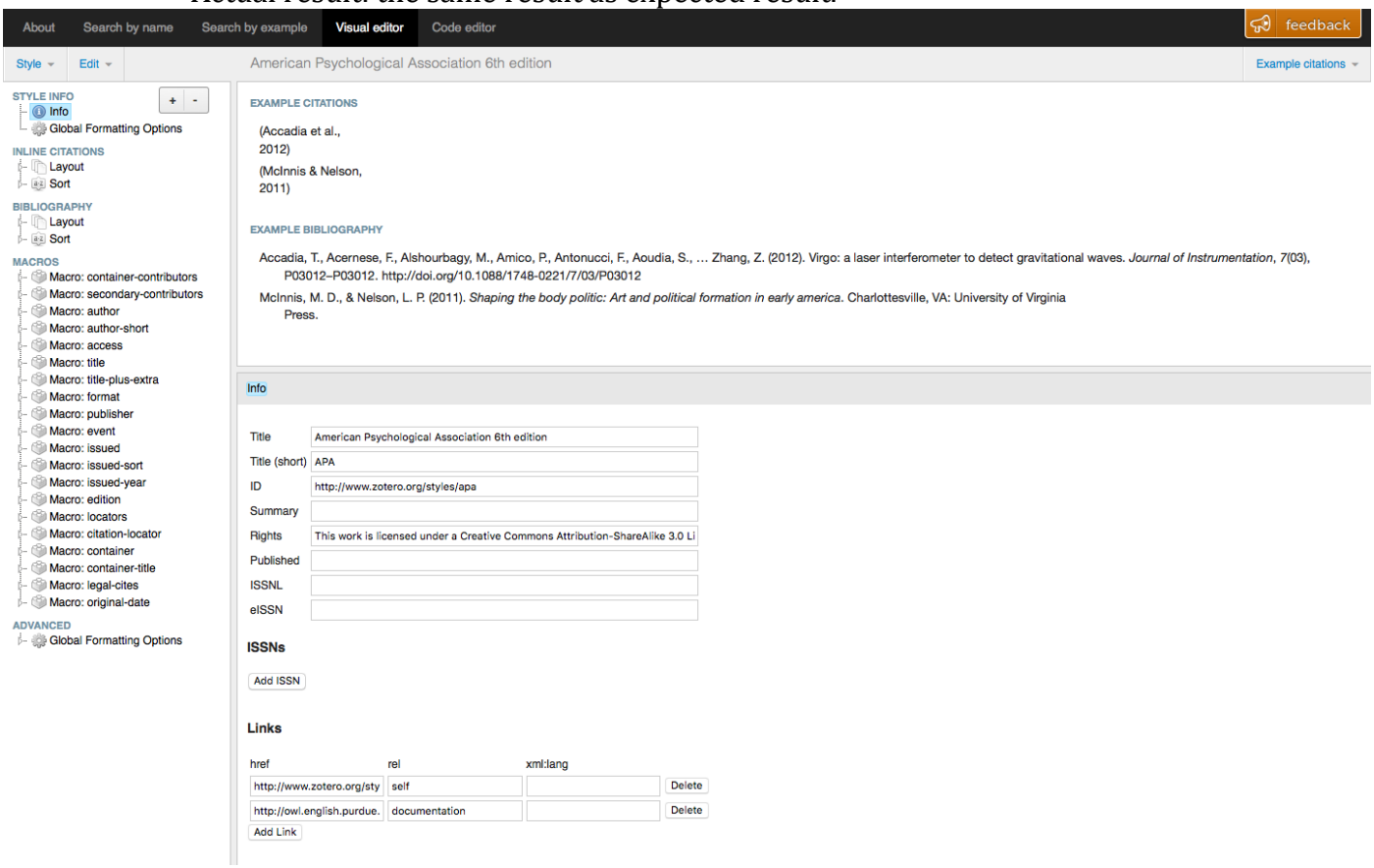


Test case 10) Edit a style from 'Code editor'.

- Expected result: It shows the style as codes.
- Actual result: the same result as expected result.

Test case 11) After search a style, edit a style by clicking ‘Edit’ button (It will go to Visual editor).

- Expected result: It shows ‘Visual editor’
- Actual result: the same result as expected result.



Test case 12) Edit a style and undo the change by clicking ‘Edit’ -> ‘Undo’ from ‘Visual editor’.

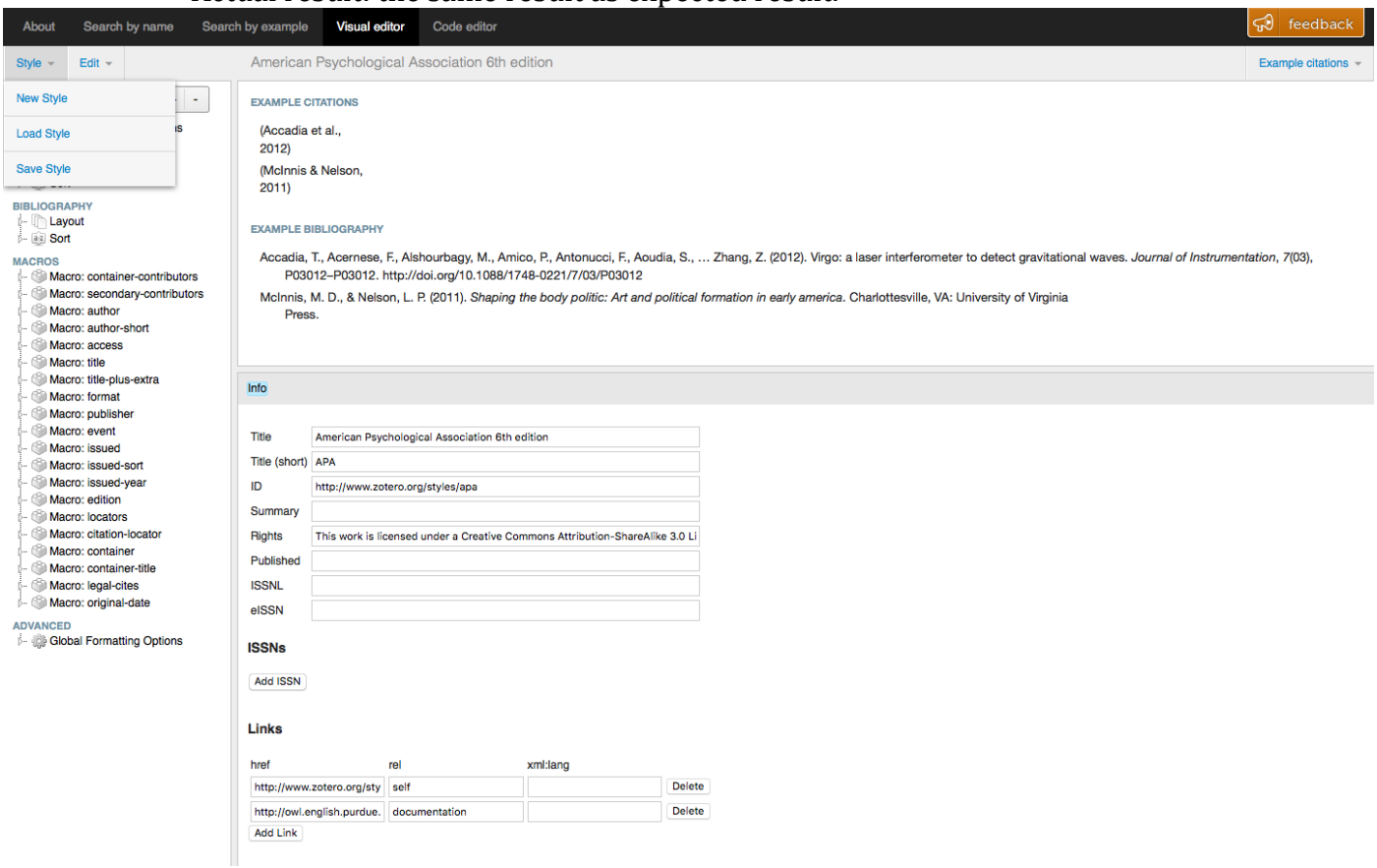
- Expected result: It undoes the change.
- Actual result: the same result as expected result.

Test case 13) Redo the change by clicking ‘Edit’ -> ‘Redo’ from ‘Visual editor’.

- Expected result: It redoes the change.
- Actual result: the same result as expected result.

Test case 14) Make a new style by clicking ‘Style’ -> ‘New Style’ from Visual editor.

- Expected result: It makes a new style.
- Actual result: the same result as expected result.



Test case 15) Save a style by clicking ‘Style’ -> ‘Save Style’ from Visual editor.

- Expected result: It saves the style.
- Actual result: the same result as expected result.

Test case 16) Load a style by clicking ‘Style’ -> ‘Load Style’ from Visual editor.

- Expected result: It loads the style.
- Actual result: the same result as expected result.