

Change request 2 log

1. Concept Location

Step #	Description	Rationale
1	We ran the system	
2	We interacted with the system after logging in using the credentials	To get familiar with some of the features of the system, and identify the screens or graphical elements we had to change.
3	We searched for "mute" terms using the IDE's search tool and applied the file extensions filter to narrow down the results, and got 9 search results for the .java filter.	Because we wanted to implement a toggling feature to the mute button on the screen.
4	We reviewed each search result and finalized User.java and header.js files for a more detailed observation.	We selected User.java because the file had the description that it contains the session object of the user and session-based information. header.js was selected because it had the muted variable as well as the isMute() and setMute() functions.
5	We looked at the methods isMuted() and setMuted() in the User class.	The method returned the status whether the notification alerts are muted or not, and the class also had the boolean variable muted.
6	We debugged the code by putting points in header.js file and User.java file.	To understand the code workflow.
7	We observed that header.js was not relevant for the functionality change request.	"mute" variable in header.js was used for SoundPlayer() and not for the notifications.
8	We marked the class User as "located".	We confirmed this class had to be modified.

Time spent (in minutes): 40

Classes and methods inspected:

- \mangoSource\war\resources\common.js
 - setUserMuted()
- \mangoSource\war\resources\header.js
 - isMute()
 - setMute()
 - SoundPlayer()
- \mangoSource\war\resources\soundmanager2-nodebug-jsmin.js
- \mangoSource\war\resources\soundmanager2.js
- \mangoSource\war\WEB-INF\jsp\events.jsp\mangoSource\src\com\serotonin\mango\MangoContextListener.java
- \mangoSource\src\com\serotonin\mango\vo\User.java
 - isMuted()
 - setMuted()
- \mangoSource\src\com\serotonin\mango\web\dwr\MiscDwr.java
 - toggleUserMuted()

2. Impact Analysis

Step #	Description	Rationale
1	We made a list of classes where the User class is being used and the use of the “muted” variable of the User class.	To track the impact of the “muted” variable inside any other classes.
2	We used regular expressions to search both the terms, “User” and “muted”, and got 3 matching files.	To understand where the muted variable is being used and what can be the impact of the change we are going to make to the “muted” variable.
3	We inspected User, MiscDwr, and MangoContextListener, and finalized MiscDwr might be impacted.	MangoContextListener was not utilizing the muted attribute of the User class, which is the concept of location. The User class has isMuted() and setMuted() methods, but they only return the value of the muted attribute, thus they have no effect on the User class itself.
4	Inspected each matching file, and found only MiscDwr class is having the toggleUserMuted() method, which is using the muted attribute to alter the user’s notification sound choices.	To examine the potential effects of a modification at the concept location on the MiscDwr class; however, the change in the User(Concept location) class is not having any appreciable effects.

Time spent (in minutes): 30

Classes and methods inspected:

- \mangoSource\src\com\serotonin\mango\vo\User.java
 - o isMuted()
 - o setMuted()
- \mangoSource\src\com\serotonin\mango\MangoContextListener.java
 - o contextDestroyed()
- \mangoSource\src\com\serotonin\mango\web\dwr\MiscDwr.java
 - o toggleUserMuted()

3. Actualization

Step #	Description	Rationale
1	We changed the value of the boolean attribute “muted” in the class “User”.	We have changed the value of the class attribute for the mute/unmute feature from false (unmute) to true (mute) for the default behavior after discovering it.
2	We performed manual tests for the updated value and performed functional testing.	To make sure everything works as expected.

Time spent (in minutes): 10

Classes and methods inspected and changed:

Inspected -

- \mangoSource\src\com\serotonin\mango\vo\User.java
 - isMuted()
 - setMuted()

Changed -

- \mangoSource\src\com\serotonin\mango\vo\User.java

4. Validation

Step #	Description	Rationale
1	Test case defined: Default Behavior should be muted. Expected output: The default behavior was mute.	This is the regular expected behavior. The test passed.
2	Test case defined: Able to unmute. Expected output: Was able to unmute successfully.	This is the regular expected behavior. The test passed.
3	Test case defined: Able to mute again after unmuting. Expected output: Was able to mute again successfully.	This is the regular expected behavior. The test passed.
4	Test case defined: Sound should not play when muted. Expected output: Sound was not played when it was muted.	This is the regular expected behavior. The test passed.
5	Test case defined: Sound should play when unmuted. Expected output: Sound was played when it was unmuted.	This is the regular expected behavior. The test passed.
6	Test case defined: Default should be mute after logging out and login again. Expected output: Was mute when logged in again after logging out.	This is the regular expected behavior. The test passed.

Time spent (in minutes): 20

5. Summary of the change request

Phase	Time (minutes)	No. of classes inspected	No. of classes changed	No. of methods inspected	No. of methods changes
Concept location	40	15	0	8	0
Impact Analysis	30	3	0	4	0
Actualization	10	1	1	2	0
Verification	20	1	0	2	0
Total	100	20	1	16	0

6. Conclusions

Since there were numerous JavaScript files containing the mute variable, concept location for this change request was more difficult than impact analysis and actual implementation. However, after carefully reviewing the User.java file, we were able to determine the modification's ultimate concept location. In addition, we experimented with altering a few JavaScript files in addition to the Java file, but ultimately we came to the conclusion that the Java file is the only one that needs to be changed. We were able to do the impact analysis quickly because there weren't many files containing this variable. Subsequently, manual and functional testing was carried out in accordance with the test cases and the functionality needed to confirm the system's correct operation.