

Change request log

1. Concept Location

Step #	Description	Rationale
1	We started the system.	
2	We interacted with the system: after logging in to the system with admin 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 the term "mute" using IDE's search tool, and we applied .java filter to reduce results. 8 files results matched up.	Because we want to have the mute/unmute button, muted by default, so the term mute can help to get the result.
4	Inspected each file and finalized User.java file and header.js for a more detailed look.	User.java file had a description that it contains the session object of the user and session-based information, and no other file was having significant description or required attributes. Header.js has the muted variables as well as the isMute() and setMute() functions.
5	We looked at the method isMuted() and setMuted() methods in User class.	The method, which was returning the status, whether the notification alerts are muted or not, and the class is having the Boolean variable muted.
6	We debugged the code by putting point in header.js file and User.java file.	To understand the running code.
7	We seen header.js was not used for the required functionality of change.	"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): 45

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\resources\dojo\dojo.js.uncompressed.js
- \mangoSource\war\WEB-INF\jsp\events.jsp\mangoSource\src\com\serotonin\mango\MangoContextListener.java
 - contextDestroyed()
- \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	<i>We made list of classes where the User class is being used and the use of “muted” variable of User class.</i>	<i>To track the impact of the “muted” variable inside any other classes.</i>
2	<i>We used regular expression to search both the terms, “User” and “muted”, and we got 3 matching files.</i>	<i>To understand where the muted variable is being used and what can be the impact of the change we are going to make to “muted” variable.</i>
3	<i>We inspected User, MiscDwr, and MangoContextListener, and finalized MiscDwr might being impacted.</i>	<i>User class is the concept of location, and it has isMuted() and setMuted() methods, and it's just returning the value of muted attribute, so no impact in User class, and MangoContextListener was not using User class's muted attribute.</i>
4	<i>Inspected each matching files, and realized only MiscDwr class has the method toggleUserMuted() method, which is using the muted attributed to alter the user's notification sound choices.</i>	<i>To analyze the impact that can be made on the MiscDwr classes by the change at concept location, but no significant impact is being made with the change in User(Concept location) class.</i>

Time spent (in minutes): 31

Below are the classes and methods inspected.

Inspected: -

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

3. Actualization

Step #	Description	Rationale
1	<i>We changed the value of Boolean attribute “muted” in the class “User”.</i>	<i>Upon finding the class attribute of mute/unmute functionality, we have updated its value from false(unmute) to true(mute) for the default behavior.</i>
2	<i>We performed manual tests for the updated value and performed functional testing.</i>	<i>To make sure everything works.</i>

Time spent (in minutes): 11

Classes and methods that are inspected and changed.

Inspected: -

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

Changed: -

- \mangoSource\src\com\serotonin\mango\vo\User.java
 - Updated User.java
 - Updated the User.java file to change the notification sound default to mute.
private transient boolean muted = true;

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): 24

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	45	15	0	8	0
Impact Analysis	31	3	0	4	0
Actualization	11	1	1	2	0
Verification	24	1	0	2	0
Total	111	20	1	16	0

6. Conclusions

For this change request, concept location was relatively tough than impact analysis and actual implementation as there were many JavaScript files that contain the mute variable but upon detailed checking of the User.java file, we were able to finalize the concept location of the change. We have also used Trial and Error method by changing some JavaScript files along with the change in java file but at the end we concluded that the change will only be required in the java file. For the impact analysis, as there were not many files with this variable, we were able to complete it smoothly. Then Manual and Functional Testing was performed as per the test cases and the functionality required to verify its proper working.