Change request log

1. Concept Location

Step #	Description	Rationale
1	We ran the system with the instructions and explored the system on Chrome.	
2	Post login, we saw the header which contained the username followed by the Mute Icon, discovering the first point of contact for change.	Helped discovering the first change that could be potentially made.
3	We performed an inspect element on the mute button only to find out that the id given to the img tag was "userMutedImg	Depending on what we would find in the inspection of the element, these details could help us locate the target file/target search term in the source code.
4	We then performed a Regular Expression string match with the keyword, "userMutedImg" over the entire project using VSCode searching tool	It helped us narrow down the target files to only 4-5 files that would come up during the searching phase.
5	This led us to the "commons.js" file, containing a function called "setUserMuted" which was manipulating the mute icon using the Instance of a Header file.	Exploring the function which handled the mute wrapper.
6	So this in-turn sent us down the file hierarchy into the "header.js" file.	Exploring files.
7	We inspected the header.js file and found out a parameter called "mute" which was set to false by default, inside of a function called "SoundPlayer".	As the name of the function, "SoundPlayer" suggests, we were down the correct path of recognizing the elements controlling the notifications across the platform, specifically the "mute" variable.
8	On understanding the variable names, we tried a search query, called "mute".	Search results gave a concise location of files that could be a target, a close target we eliminated was SoundManager2.js since it's a library file and doesn't control the feature.
9	We found out, there was also a file called "User.java" containing class "User", in which a private variable "muted" was declared and set to "false".	As the name of the file suggests, users.java would handle the notifications and sounds heard on the individual side of the program and hence was one of the suspected locations.
10	Still we weren't sure if this was 100% correct, so we tried making the variable "true" in both of these files, and re-ran the program	To check and be certain that we are targeting the correct file and variable that needs to be changed, we were testing out our temporary change location.
11	On re-running, we successfully performed the required changes. We then marked the function SoundPlayer and class User as "located".	We confirmed these function and class had to be modified.

Time spent (in minutes): 30

List the classes and methods that you inspected.

Classes and methods inspected:
- /Mango/src/com/serotonin/mango/vo/User.java
    - class User
- /build/resources/header.js
    - Method SoundPlayer
- /build/resources/common.js

- o Method setUserMuted
- /build/resources/soundmanager2.js
  - o Method SoundManager

2. Impact Analysis

Step #	Description	Rationale
1	We made a list of files that were present in the search results for 'userMutedImg' and "mute" search queries.	These list of files were used to determined the potential files that may need handling.
2	We started the inspection with the function 'setUserMuted'.	Since this was the first function which exposed the img id "userMutedImg" on the frontend.
3	Upon Inspecting this function, we found out that this is a wrapper function which points to a header.js file, specifically a function called SoundPlayer inside the header.js file.	The variables that were used in the Soundplayer method directly handled muting the user sounds.
4	Hence, we changed the default Boolean value of the "muted" variable to true.	Testing.
5	We searched for the term "mute" using the searching tool of the IDE.	Just to cover the corner cases in case we needed to target any other files as well.
6	We found out 3 major files, which contained this search term and could be a potential change, - User.java (class User) - Header.js (method SoundPlayer) - Soundmanager.js (method SoundManager)	
7	After inspection with the mentioned rationale, we decided to eliminate Soundmanager as a potential target file and proceeded with the header.js file as marked for change.	Upon inspecting soundmanager and header.js we found out that soundmanager is actually a library code and header.js is a modification of soundmanager tailored to the custom usecase of this application, and the factually used file was header.js
8	We then changed the private muted variable inside Class User as well and proceeded to testing the changes	Since the user class also had the option to mute the notifications as an option (which was disabled by default)

Time spent (in minutes): 30

List the classes and methods that you inspected.

Classes and methods inspected:
- /Mango/src/com/serotonin/mango/vo/User.java
  - o class User
- /build/resources/header.js
  - o Method SoundPlayer
- /build/resources/soundmanager2.js
  - o Method SoundManager

3. Actualization

Step #	Description	Rationale
1	In the file header.js, method SoundPlayer, the constructor variable, "muted" was changed to true.	We realized that this variable was initializing notification preference across the system as unmute by default since it was set to false initially. Hence we toggled it to true.
2	In the file User.java, a private variable "muted" value was changed to "true".	We realized that this variable was initializing every users notification preference as unmute by default since it was set to false initially. Hence we toggled it to true.

Time spent (in minutes): 5

List the classes and methods that you inspected and separately the ones you changed.

Classes and methods inspected:
- /Mango/src/com/serotonin/mango/vo/User.java
  - class User
- /build/resources/header.js
  - Method SoundPlayer

4. Validation

Step #	Description	Rationale
1	Test Case 01: After login, the volume icon should appear muted.	This is the new expected behavior, denoting that the notifications are muted by default after login.
2	Test Case 02: After logging out and logging in back, the volume icon should appear muted.	
3	Test Case 03: When logged in, Reloading the page should still keep the volume button muted unless changed manually to unmute by user.	Post reload the system should not lose the functionality, it should stay consistent

Time spent (in minutes): 10

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	30	1	1	3	1
Impact Analysis	30	1	1	2	1
Actualization	5	1	1	1	1
Verification	10	-	-	-	-
Total	75	3	3	6	3

6. Conclusions

For this change request, booting up the system, getting it up and running was a tedious task given the programs used are quite old and resource heavy. Post setup, this change request was relatively easy and straightforward. Concept location and impact analysis and testing went hand in hand since the change was relatively easy and short.

Inspecting element helped us obtain the keywords easily. The spread of potential target files was also less since we were able to search for target keywords using the IDE and make the changes to test them quickly. There were a couple of methods which required skipping over and weren't directly concerned with the feature in question.

Maintaining GitHub for the repository and making merge request was something I learnt as a key takeaway along with Change Request formatting and approach.