

Change request # 1 log

1. Concept Location

Step #	Description	Rationale
1	We ran the system	
2	We loaded up the watch list to see the values that needed modifying.	This was important to see where the values needed to be changed.
3	This meant we had to find the root location of where to add the decimal places.	
4	We immediately inspected the element in the table and saw the table ID was pointValue.	
5	The pointValue was something we used control+shift+f to find all occurrences. This led to many, many files having this.	We wanted to see if we could narrow the location down, but it was a bit of a rabbit hole.
6	We looked in WatchListDao.java, PointValueType.java, PointValueDao.java, and User.java	It got to the point where we had gone through many files and needed help.
7	We reached out to the TA regarding this and tried to gain some more knowledge on this and we found the AnalogStatistics.java file was the location.	Since we were blocked, we needed to reach out for help to get a new perspective.

Time spent (in minutes): 120

- WatchListDao.java (src/com/serotonin/mango/db/dao)
- PointValueType.java (src/com/serotonin/mango/rt/dataimage)
- PointValueDao.java (src/com/serotonin/mango/db/dao)
- User.java (src/com/serotonin/mango/vo)
- AnalogStatistics.java (src/com/serotonin/mango/view/stats)

2. Impact Analysis

Step #	Description	Rationale
1	Initially, the thought process was to modify the set and getValue functions, but that was not correct as nothing was changing.	Since we found the set and getValues, it seemed to make sense that we would modify the return values, but that was not enough.
2	The AnalogStatistics.java file had multiple functions we needed to modify and that made more sense to work with.	Multiple mathematic functions existed here so we could just go and test the changes and add the formatted values

Time spent (in minutes): 30

- WatchListDao.java (src/com/serotonin/mango/db/dao)
- PointValueType.java (src/com/serotonin/mango/rt/dataimage)
- PointValueDao.java (src/com/serotonin/mango/db/dao)
- User.java (src/com/serotonin/mango/vo)
- AnalogStatistics.java (src/com/serotonin/mango/view/stats)

3. Actualization

Step #	Description	Rationale
1	In the AnalogStatistics.java class, we first modified the "getMinimum" to truncate the number and format it to have 2 decimal places.	This would make it so we would be able to meet the requirements
2	In the AnalogStatistics.java class, we first modified the "getMaximum" to truncate the number and format it to have 2 decimal places.	
3	In the AnalogStatistics.java class, we first modified the "getAverage" to truncate the number and format it to have 2 decimal places.	
4	In the AnalogStatistics.java class, we first modified the "getSum" to truncate the number and format it to have 2 decimal places.	

Time spent (in minutes): 20

- AnalogStatistics.java (src/com/serotonin/mango/view/stats)

4. Validation

Step #	Description	Rationale
1	We went to test the changes by loading up the watch list and waiting for the values to update. Also used a FileWriter to log the changes in a text file.	
2	After a short period of time, the new data was outputting the rounded data which was correct. The text file also provided the correct data.	The changes were successful.

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	120	5	0	5	0
Impact Analysis	30	2	0	7	0
Actualization	20	1	1	4	4
Verification	20	1	0	4	0
Total	190	9	1	20	4

6. Conclusions

This proved to be the most time-consuming change for us since we had to search through many files. After getting some help from the TA and other team members, we were able to solve the problem and make the correct changes. The other two changes were not nearly as complex since the changes were much more localized to specific areas, but this value change was something that impacted many portions of the site.