

Litterbug – A Software Approach to Littering

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1. USER STORIES DOWNLOAD

The developed user stories can be downloaded from:

<https://drive.google.com/open?id=1si0rwqLioRIXelkYCfROO1B9LIeQFyjM>.

The file to be downloaded has individual folders for each user story that we have developed so far. They can be viewed in any browser but we recommend using Google Chrome.

2. USER STORIES DUE TODAY

2.1 Submit a Photo (User Case 1.4)

- **Who worked on this feature?** – Kevin and David collaborated on the “Submit a Photo” user story.
- **What do the unit tests do?** – The unit test confirmed that the file was being sent when the “submit” button was clicked”. Once implemented the submission location will be changed to the system’s database.
- **What problems were encountered?** – We did not encounter any problems; the story is very simple and we both had experience in this type of web application. This was also very similar to the user story “report a user” so much of the code was reused.
- **How long did each task require?** – Because almost all of the code from “report a user” was reused this story only took an hour to write.
- **What is the current status?** – Currently this unit has been tested but not implemented. It will need a working database built before any meaningful implementation can take place.
- **What is left to be completed?** – The page needs better styling and to adjusted to populate the location of the user’s GPS(mobile) or as in the web application populate the location id, once that server is setup to provide the necessary information.

2.2 Earn Badges/Medals (User Case 1.7)

- **Who worked on this feature?** – Alexander and Kevin worked together on developing the “Earn Badges/Medals” user story.
- **What do the unit tests do?** – The unit tests demonstrated that the earning badges functionality was capable of displaying the user a list of the badges they’ve earned so far. The first unit test consisted of clicking a view earned badges button, which displayed a new page listing all badges earned.
- **What problems were encountered?** – This user story was not too complicated so we did not encounter any coding challenges. The main challenges actually came from the creative element insofar as figuring out appropriate names for badges and making style related choices.

This work is supported by Michael Johnson of Oregon State University.

- **How long did each task require?** – The coding portion of this section was not difficult, it took approximately 1.5 hours to complete.
- **What is the current status?** – Although unit testing has taken place and succeeded, integration testing is still required which can only be done once our database is online. Only then can we do our integration testing and implement fully.
- **What is left to be completed?** – Aside from getting the database online and performing our integration testing, the only things remaining with the earning badges user story are stylistic changes to make things more visually appealing for the end user and the creative aspect of generating creative badge names and criteria for when a user has earned a particular badge.

2.3 Confirm a Cleaned Area (User Case 1.5)

- **Who worked on this feature?** – David and Hitesh worked together on the “Confirm a Cleaned Area” user story.
- **What do the unit tests do?** – The unit tests confirm that the user will be asked to confirm an area as clean if they are standing in an area that was recently marked as cleaned, that the system will prompt the user to enter a rating (out of 5 stars) if they mark “Yes” for the above question, and that the user feedback will be successfully saved to the database.
- **What problems were encountered?** – There were some difficulties getting the stars to appear if the user hit “Yes”, but only saying “Thank you for your feedback if they hit “No”. Also, it was surprisingly challenging to color all stars up to the rating that the user selected. For example, if a user rates a cleanup job 3 stars, the first 2 stars should be marked as well. Implementing this took a bit longer than expected.
- **How long did each task require?** – In total, this user story took 6 hours to write.
- **What is the current status?** – The functionality is fully developed so the system is able to ask the user for their rating and can post the feedback and rating. However, as the database has not been set up yet, the data is not actually consumed.
- **What is left to be completed?** – The remaining tasks are setting up the database to consume the data that we send and perhaps working on the styling a bit to make it look a bit nicer.

2.4 Comment on a User’s Activity (User Case 1.9)

- **Who worked on this feature?** – Hitesh and Alexander developed the “Comment on a User’s Activity” user story together.
- **What do the unit tests do?** – The unit test confirmed that the comment was being saved when added to a User’s activity.
- **What problems were encountered?** – There were no problems encountered, since we had prior experience in this type of web application. We used an array data structure for the prototype to demonstrate to the customer instead of a database.
- **How long did each task require?** – This story took about 3 hours to write.
- **What is the current status?** – Currently we have built the functionality to pull a user’s profile and allow another user to comment on their activity. Like the remaining features, it is fully developed and functional but waiting on our database to be live before it can be considered implemented.
- **What is left to be completed?** – We want to improve the UI for this user story and make it look nicer. Other than that we just need the database to be set up on the back-end. The front-end functionality doesn’t need any additional work.

3. UML DIAGRAMS DEVELOPED THIS WEEK

We developed the UML diagrams for this week's user stories last week, so there were not any UML diagrams or spikes for us to develop this week. We were able to focus on just finishing up the final components of the app.

4. REFACTORING

4.1 Submit a Photo (User Case 1.4)

As most of this code was based on the other user story, very little refactoring was needed. Just changing some variable names was sufficient.

4.2 Earn Badges/Medals (User Case 1.7)

Our database is not up and running as of yet which means there are certain elements in our code that are serving as placeholders for sections that will request and receive data from the database reflecting the badges they've earned thus far. Once the necessary code to enable database communication is written we will most likely be doing at least a slight amount of additional refactoring.

4.3 Confirm a Cleaned Area (User Case 1.5)

We went back and refactored the code that asks the user if the area was cleaned and to submit a rating out of 5 stars if the user says that the area was in fact cleaned. We were able to eliminate several lines of code by using one feedback object to be shown when the user hit yes or no, instead of showing two completely different objects, which was how we had it set up at first.

4.4 Comment on a User's Activity (User Case 1.9)

The customer was satisfied with the functionality of the story. Further styling is needed for the final iteration though.

5. QUESTIONS FOR THE CUSTOMER

5.1 Submit a Photo (User Case 1.4)

This was a basic user story and we had no further questions for the customer.

5.2 Earn Badges/Medals (User Case 1.7)

The customer, upon reviewing our preliminary version of the earning badges functionality, suggested that we also indicate to the user how close they are to earning the next badge. This is something that we as a group will need to meet about to discuss the implementation of and how it will affect the project time-wise.

5.3 Confirm a Cleaned Area (User Case 1.5)

The only question that came to mind was if the customer wants users to be able to enter comments when submitting feedback, or just select one of "Yes"/"No" and then select the number of stars if the user selected Yes, as is the current behavior.

5.4 Comment on a User's Activity (User Case 1.9)

Our questions for the customer are related to styling and user interface of this page. The functionality is quite straightforward and has been described clearly by the customer.

6. INTEGRATIONS TESTS

6.1 Submit a Photo (User Case 1.4)

This page will need to be integrated with the database once the database has been created. This will test the code's ability to successfully upload photos and the necessary location and task ID data. This page will also need retrieve the relevant task ID and location ID from the database so that it can be attached to the photo submission.

6.2 Earn Badges/Medals (User Case 1.7)

The “earning badges/medals” user story requires integration testing with the “confirm an area was cleaned user story”. In order for a badge to be granted to a particular user, another user must confirm that the area the first user reported that they cleaned was actually cleaned. Once that happens a badge can be assigned/earned by the user. Our integration testing will confirm that this process is working properly. The second integration test we will have to run is to ensure that the user is able to view the badges they've earned thus far which will require communication with our database. Our integration test here will confirm that the application can successfully request the proper data from the database.

6.3 Confirm a Cleaned Area (User Case 1.5)

This piece of the app must interact with several other entities, so we wrote integration tests to interact with our location services module, the maps server, and the database itself. As mentioned earlier, this user story should trigger the “earn badges/medals” action. We also had to make sure that the app would successfully ask the user to confirm an area as cleaned when they were standing in an area that had recently been marked as cleaned. This requires the location services module to notify the user that they are standing in a green area and the user-side to then interact with the map server to actually show the area as green. Those are the main three interactions that we tested other than the database.

6.4 Comment on a User's Activity (User Case 1.9)

This page will be integrated with the database once the database is up and running. The test will verify that the code can successfully store comments for the users and others to view. Likewise we will need to ensure that the User entity integrates well with our web page where one user can comment on another user's activity.

7. SCHEDULE FOR WHAT TO COMPLETE NEXT WEEK

As this is the final week of the quarter, and we have finished developing the 7 user stories that we scheduled for development, there is no schedule for what to complete next week.

8. MEETING WITH THE CUSTOMER

The customer was able to meet with us on Wednesday, August 15th. He gave us feedback about the user stories we implemented last week and answered questions for us regarding the user stories we are working on this week.

9. SUMMARY OF GROUP MEMBER CONTRIBUTIONS

- David Mednikov
 - Worked on “Confirm a Cleaned Area” and “Submit a Photo” user stories
 - Answered questions about “Confirm a Cleaned Area” user story
 - Described refactoring, questions for the customer, and integration tests for “Confirm a Cleaned Area” user story
 - Compiled the Google doc into the ACM format and created zip file containing features that have been developed so far
- Hitesh Varma
 - Worked on “Comment on a User’s Activity” and “Confirm a Cleaned Area” user stories
 - Answered questions about “Comment on a User’s Activity” user story
 - Described refactoring, questions for the customer, and integration tests for “Comment on a User’s Activity” user story
- Alexander Yfraimov
 - Worked on “Earn Badges/Medals” and “Comment on a User’s Activity” user stories
 - Answered questions about “Earn Badges/Medals” user story
 - Described refactoring, questions for the customer, and integration tests for “Earn Badges/Medals” user story
- Kevin Allen
 - Worked on “Earn Badges/Medals” and “Submit a Photo” user stories
 - Answered questions about “Submit a Photo” user story
 - Described refactoring, questions for the customer, and integration tests for “Submit a Photo” user story