SW Engineering CSC648/848 Section 02 Spring 2018

Milestone 1

US Environmental

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Team 09

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History Table:

M1 2/28/18	
3/18/18	Changes made.

Executive Summary:

Parks and recreational areas are great places to rest and relax. However, since these areas are public, maintenance has always been an issue. Problems ranging from dangerous litter, such as broken glass, to broken swings or drinking fountains can ruin an entire afternoon and if ignored can lead to costly litigation. Dispatching work crews to check on areas that don't have issues on a daily or weekly basis, is a costly waste of scarce resources and is both inefficient and impractical.

US Environmental believes that the responsibility of keeping our environment and more specifically, our parks clean falls on us. We provide an efficient and easy-to-use forum that allows users to search for the status of cleanliness of a public space, existing issues, and post about problems that need to be resolved. The platform also provides an easy to use city manager page which will allow cities to save money and not need to designate an absurd amount of money for consistent maintenance. This will allow for a more efficient use of city resources jobs and in future releases allowing groups to bid for the cleanups.

The team at US Environmental is comprised of six individuals that all feel strongly about our environmental responsibility and work tirelessly to make sure that our parks and public spaces are clean and safe for everyone. The back-end team comprises of Greg Strom and Alonzo Contreras, with Greg as the back-end lead. The front-end team is comprised of Siri Motamarry, Patrick Wong, and Zhewei Zhang, with Siri as the front-end lead. Tony Chen is the team lead.

Use Cases:

1. **Unregistered Users** (View only):

Jane is a college student at SFSU wants to visit the local park around her apartment. The last time she visited the park, there was a lot of trash all over the field. Before she heads out this time, she heads over to www.us-environmental.com to check on the status of the park. She **searches** the website for the park she plans to visit and finds reported issues at the park. The issues she finds can be in one of the the following states,

1) The current **case status** is closed, with a short note stating what issue was fixed and when, so she heads out and ready to enjoy the day at the park.

Or

2) The current case status is open, with a short note stating the current complaint, so she decides to stay in or go to the cafe instead.

2. **Registered User**:

David is a 45 year old father of 2, staying in San Francisco with his family and wanted to take his kids to the park so that they can play and have fun. During his visit, he finds a large spill of something that looks like oil in the kids' sandbox. He pulls up the www.us-environmental.com website on his phone, **searches** for the park he is at, and tries create a new post and this is when the website prompts him to register. So, he goes ahead and **registers** as a new user by entering basic data such as name and email. He then **creates** a post stating the situation at the park. On his way back, he realizes that he did not describe the situation correctly. He logs in, **edits** the post, and saves the changes to it. After he gets back to home, he logins to the website and attaches the photo that he had captured of the spill and saves the changes to the post. Later in the evening, he opens the website and checks the **case status**. Since David sees that the issue is closed, he knows that can safely take his kids to the park without needing to worry if there is waste in the sandbox.

3. **Admin**:

John is the administrator for the website: www.us-environmental.com. His job is to ensure the quality of contents on the website by handling the issues sent from the city manager. He logs into an admin account exclusively for city employees. Then, John can check the details of each post. If he sees any inappropriate contents pointed by the city manager, he can **delete** it. No user is allowed to modify any data (except their own). John will be able to generate a report of

issues that have been solved (or currently worked on), and send it to the city manager. By handling the issues this way, the city can provide better services for the city residents.

4. **The City manager**:

John is the city manager of San Francisco. His job is to review posts, assign and prioritize repairs of the issues by sending them to admin users. John can browse the contents on the website. If he sees any inappropriate contents or receive any issues reported from registered users, he can prioritize them (the issues from registered users usually have the highest priority), and assign them to different admin users to handle with. After the issues are solved by admin users, John will be able to receive a report of them so that he can double check whether the issues are solved or not. By being the issue manager of the website, John as the city manager can provide better services for the city residents.

Data Definitions:

Unregistered users - Shall be able to search and view current posts and issues.

Registered users - Shall be able to register, create, and edit posts.

Admin - Shall be able to monitor/block posts. Shall not be able to edit other users posts.

City Manager - Shall be able to close tickets as well as allocate work to specific parks.

Search - Users shall be able to find specific park/location

Case status - Shows whether park/location is clean or not.

Incident - Problem/issue at park/location

Register - User shall be able to register to allow them to post, upload pictures and edit posts.

Creates - User shall be able to create a post.

Edits - User shall be able to edit their posts.

ID - a unique number given by the system to identify users and incidents.

Username - a unique name the user chooses to post under.

Password - a key that must be typed in to allow access to users.

Incident Report - this includes date, description, photo, address, location, and priority of the report.

Functional Requirements:

1. Unregistered users shall be able to search for any park in the Bay Area.

2. Unregistered users shall be able to view all posts.

3. Unregistered users shall be able to flag posts.

4. Registered users shall be able to do everything that unregistered users can. - This includes search, viewing posts, and flagging posts.

5. Registered users shall be able to post on forums. - This is just comments regarding said park.

6. Registered users shall be able to create tickets. - Tickets are how users can inform the admins about a situation that requires attention.

7. Registered users shall be able to edit their own posts. - In case users need to update a post or ticket, they can log in and edit their post. However, the post will have an (edited) tag after an edit.

8. Administrative users shall be able to do everything that registered users can. - This includes posting as well as editing their own posts.

9. Administrative users shall be able to delete posts, but not edit them. - If an administrator deems that a post is inappropriate, user can delete a post.

10. Administrative users shall be able to ban accounts. - If a user consistently makes inappropriate posts, administrators can ban the account.

In future releases we plan to add in a feature that allows for city pre-approved subcontractors to search for open issues and bid to fix them.

Non-Functional Requirements:

- System shall response visually within 5 seconds
- File size in no time shall exceed 2 Mbytes
- Users with high-school diploma, after 1 hour training, shall complete the task in 5 minutes with no more than 2 errors.
- Tools from XYZ shall be used for requirement management
- Each requirement shall have identifiable portion of code associated with it referenced by module name and code line number
- Each WWW page shall have official company logo in upper left corner
- The following user data shall be collected: Full name, Phone number, email
   the data shall be used ONLY for: Contact in case the report needs more details

High-level System Architecture:

- Server Host: AWS 1x 2.5gHz CPU 1GB RAM
- Operating System: Ubuntu 16.04
- Server Database: MySQL 5.7
- Web Server: Apache 2.4
- Server-Side Language: Javascript 1.8
- Web Framework: Bootstrap
- IDE: InteliJ
- URL: us-environmental.com

Competitive Analysis:

- : does not have   + : has the function

	epa.gov	epa.ie	broward.org	us-environmental
Text Search	+	+	+	+
Browse	+	+	+	+
Account Mgmt	-	-	-	+

Although there are many environmental sites out there, they do not provide a registered users account page. Our site offers that on top of everything else the competitors have. Account management entails the ability to edit old posts as well as a centralized page where a user can see all of his/her tickets submitted and if they have been resolved or not.

Team:

Team Lead: Tony Chen

Front-End Team: **Krishna Sirisha Motamarry**(Front-End Lead), Zhewei Zhang, Patrick Wong

Back-End Team: **Greg Strom**(Back-End Lead), Alonzo Contreras

Checklist:

- Team found a time slot to meet outside of the class   **Done**

- Github master chosen   **Done**

- Team decided and agreed together on using the listed SW tools
  and deployment server   **Done**

- Team ready and able to use the chosen back and front end frameworks and those who
  need to learn and working on it   **Done**

- Team lead ensured that all team members read the final M1 andagree/understand it
  before submission   **Done**