SW Engineering CSC 648/848 Summer 2019

Milestone 1

06/26/2019

Team 5

Team Lead: Jonathan Kaldani

Github Master: Brian Lai

Front End Team:

- Anya Livshyts
- Tianchen Liu
- Habtom Asfaha

Back End Team:

- Anwar Halteh (Back End Team Lead)
- Justin Zhu
- Sandeep Dhakal

Submission History Table

Initial Submission: 06/30/2019

I. Executive Summary

Unfortunately today there is a rapid negative environmental change of the state of our planet. This is due to climate change, waste neglect, and many other things that hurt our environment. People today are becoming more environmentally aware today than ever before. People want to participate in the environmental movement to make Earth what we all call home better and safer for us and for the generations after us.

We are developing an application that is called ***BaySpace***. The purpose of this application is to view and post about environmental problems in a local area. People can also view the current status of environmental issues to see if progress has been made. Users will also have the functionality of seeing the geo location of where the environmental issues are located. This functionality will help users avoid going to areas that could be considered hazardous.

Our team that is developing this application is composed of 8 Computer Science students at SFSU. We have designated front end and back end teams that will support the development of this application. In addition to this, we have a github master and a team lead that leads this product development efforts.

II. Personae/Use Cases

Categories of users:

1. **Client- Checking App**

Age: 18 - 100

Client who checks the app in order to know of any environmental issues. Requires a service- app functionality; is Environmentally aware; Forward-thinking.

Name: Sophia

- A Student at SFSU
- Studies Environmental Science
- Babysits as a side job
- Is checking parks nearby to take the children she is babysitting

Use Case:

- Sophia has always been environmentally conscious. When she was looking for babysitting work, she was hired by a family who is also environmentally conscious, and appreciate her being mindful. Before she takes the children on an outing to the park, she needs to check whether the road and destination are safe. She checks the app, and notices a current post that is being resolved. She decides to take the children to a different park, just to be safe.

2. Client- Posting in App

Age: 18 - 100

Client who wants to update the app with new information when he sees it; Environmentally and Civic minded; Wants to help

Name: Mark

- Athletic
- Member of Civic Hackers
- Wants to help
- Proactive

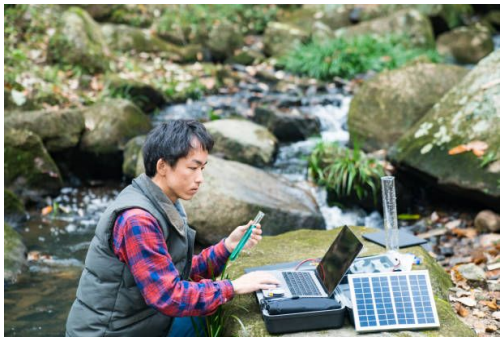
Use Case:

Mark is running through Golden Gate Park. He sees that there has been an accident. A car has crashed into a fire hydrant, and there is water and oil spilling everywhere. He stops, pulls out his phone, and needs to report the incident. He sees that there is police on the way, but knows that the Department of Public Works needs to know of the water and oil spillage. Using our app, he takes a picture of the incident, comments the environmental hazards, and sends it in.

3. Client- Checking Website

Age: 18 - 100

Client who checks the website in order to know of any environmental issues. Requires a service- app functionality; is Environmentally aware; Forward-thinking.



Name: Lewis

- A researcher
- Environmental Scientist
- Prefers web to phone applications
- Needs information on environmental events nearby

Use Case:

- Lewis opens up the website on his laptop. He is researching common environmental problems in the area. He is able to browse the “Current” and “Past Posts” from parks all over the SF area; he is able to read the comments and descriptions of each post, and does not require a log in to do so. If he has questions about a specific post, he can contact the DPW team. He is also able to look up events that are happening in the parks, as well as tips for being environmentally-conscious in your daily life.

4. Admin/DPW worker- Checking App

Age: 25 - 100

Person in charge of maintaining the reports in app; dispatching crews to fix problems; Checking for false reports, and crude posts.

Name: Katie

- DPW Employee
- Has connections with the city forestry and agriculture department
- Attention to detail
- Works long hours, has many responsibilities

Use Case:

- Katie is in charge of receiving and checking the posts/tickets as they come in. She has a team that discards any false or prank posts, and also dispatches the appropriate crew to the location of the environmental dilemma. She opens up the post about the car accident in G.G Park. Looking through the details that Mark posted, she contacts the necessary clean up crews. Once they arrive on the scene, she changes the post status to “In Progress.” After the team notifies her that the scene is clear, she moves the post from “Current and In Progress” to “Past Posts.” In this way, she closes the ticket.

Goals/Scenario:

The city council launched the environmental reporting app, a program that allows citizens to alert and communicate neighborhood concerns to the city. A public launch is essential to optimal civic engagement - It is also a testament to the hours of planning efforts and coordination necessary to provide and effective customer service solution to residents. With the city and department-wide endorsement, the residents shall report requests whether or not select departments are ready to receive them, so citywide acceptance is critical. The city officials can route the issue to the corresponding department to open up a work order, and notify the citizen through the app about the progress.

III. Main Data Items and Entities

Client

Someone using the application; Will submit a ticket

Admin

A City Worker who is involved in receiving and checking the posts as they come in; Will close the ticket

Ticket

A submitted Issue onto the website

Crew

DPW/City Worker team sent out

DPW

Department of Public Works, used in this report as most likely that department would be most involved in this venture

Status

Status of the ticket. Options are: “Submitted”, “Current and In Progress,” “Past Posts”

Recent

A catalogue of “Current and in Progress” & “Past Posts”

Events

A calendar of events happening in the available parks

Map

A usable map; available for Clients in order to navigate around the parks and issues

Tips

A List of suggestions on how to be environmentally conscious

IV. Functional Requirements

I. Search Function

All user should able to search the park by park name, park number or zip code.

II. Register/Login

All user will be able to register or login to the website.

III. Post

Register user should able to post the environmental issue of the park.

IV. CAPTCHA

Register and login should have CAPTCHA to prevent automated attacks.

V. Current issue/post

All user should able to see all the current environmental issue/post.

VI. Change the status of the post

The city management should able to change the status of the post after an issue was solved or had proved not exist.

VII. Image or Video attachments

Register user should able to attach images or videos in their posts.

VIII. Able to pin location of the issue

The user should able to pin the location of the environmental issue that they encounter.

IX. Recent view/search

The user should be able to see their recent view in the home page or recent search in the drop down of the search bar.

X. Name and image of the park

The website should display the name and image of the park.

XI. Notified by Email or Phone when an issue you posted is resolved

Before a user posts an issue, they are required to register. During registration, users must input their email and/or phone number. When a user posts an issue, they become the author of that issue and will be notified when an action is taken regarding the issue they posted.

XII. Tutorial

New register user will have a quick tutorial on how to post and search.

XIII. Sort

User should able to sort the post base on time, category, relevance.

XIV. Advanced search

Apply search filters that will alter the search results to fit the threshold. No keywords are required to initiate an advanced search.

XV. Number of current issue

Number of current environmental issue of the park will display to all user

XVI. Rating

Register users can upvote and downvote the park depends on their satisfaction to the environment of the park.

XVII. Map

The website will have a Map of the park and display the location of the environmental issue of the park

XVIII. Admin

Admin can ban users and can remove inappropriate listing that doesn't relate with the website and can view websites statistics

XIX. Browser

Users can view the different environmental issue on the website without login

XX. Profile

Users should have a profile with avatar and brief description of themselves.

V. Non-Functional Requirements

l. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in MO (some may be provided in the class, some may be chosen by the student team but all tools and servers have to be approved by class CTO).

2. Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of two major browsers

3. Selected application functions must render well on mobile devices

4. Data shall be stored in the team's chosen database technology on the team's deployment sewer.

5. No more than 50 concurrent users shall be accessing the application at any time

6. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.

7. The language used shall be English.

8. Application shall be very easy to use and intuitive.

9. Google analytics shall be added

10. No email clients shall be allowed

I l. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated.

12. Site security: basic best practices shall be applied (as covered in the class)

13. Before posted live, all content (e.g. apartment listings and images) must be approved by site administrator

14. Modem SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development

15. The website shall display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Spring 2019. For Demonstration Only " at the top of the WWW page. (important so as to not confuse this with a real application).

VI. Competitive Analysis

Our competitive analysis focused mostly on these three competitors:

https://www.citysourced.com/

https://seeclickfix.com

https://sf311.org/home

	CitySourced	SeeClickFix	SF311	Our“Awesome App”
Instant access	0	3	4	5
Lazy registration	0	5	5	5
Custom app	5	3	3	3
Email/push notification	5	5	3	4
Multi-language support	0	5	5	5
Open source	0	3	0	5

On a scale from 1 to 5

BaySpace has advantages when it comes to instant reporting and community contributing to open sourced project. It is essential to keep the reporting and registration process simple so that we can keep our customers from jumping ship. Our goal is to keep the project openly sourced, so developers can all contribute to it and make the project more ideal and user-friendly.

VII. High Level Tech/Architecture Used

Server Host	Amazon Web Services (AWS) EC2
Operating System	Ubuntu 18.04.2 LTS Server
Database	MySQL Database
Front End	Bootstrap 4.3.1 (HTML, CSS, JavaScript)
Back End	JavaScript + NodeJS 12.5.0 + Express
APIs	Google Maps API
Supported Browsers	Mozilla Firefox, Google Chrome, Safari
IDEs	Visual Studio Code, IntelliJ, WebStorm

VIII. Team

Team Lead: Jonathan Kaldani

Github Master: Brian Lai

Front End Team:

- Anya Livshyts (Document Master)
- Tianchen Liu
- Habtom Asfaha

Back End Team:

- Anwar Halteh (Back End Team Lead)
- Justin Zhu
- Sandeep Dhakal

IX. Checklist

Team found a time slot to meet outside of the class	**On Track**
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 are working on learning and practicing	**On Track**
Team lead ensured that all team members read the final M1 and agree/understand it before submission	**On track**
Github organized as discussed in class (e.g. master branch, development branch, folder for milestone documents etc.)	**Done**