

Final Project

SW Engineering CSC 648/848 Summer 2019

Team 5: BaySpace

08/12/2019



Team 5

Team Lead: Jonathan Kaldani (jkaldani@mail.sfsu.edu)

Github Master: Brian Lai

Front End Team:

- Anya Livshyts (Front End Lead)
 - Tianchen Liu
 - Habtom Asfaha

Back End Team:

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

BaySpace



Team 5: BaySpace

URL: <http://ec2-54-215-173-150.us-west-1.compute.amazonaws.com/>

I. Product summary

Who is this product for? The target audience for this application are people from any age range, and all walks of life. Any person or group that wants to know what is going on in a nearby open-space, park or beach - this is for you.

What are the product's basic details? BaySpace is a neat, sleek, information packed home for all things environmental. Made for outdoorsy people, by outdoorsy people, we know exactly what you worry about when going outside. With BaySpace, planning your outdoor adventure is easy.

Where would someone use this product? At home, outside, in your car, at work; anywhere in the Bay Area - we got you.

When should someone use the product? Want to check on a previous oil spill? Make sure the park you are taking your kids to has no problems? That the beach near you has no recent reports?

Why is this product useful or better than its competitors? Sleek, fast, and info-packed. We bring you the environmental scoop as soon as it is reported, and update as soon as it is resolved. Everything you need in one place, all you need to do is check.

How does the product work? Let's say you walk past your favorite park, and spot a busted fire hydrant. Water everywhere, flooding the playground. You log onto BaySpace, and with a few quick clicks, the incident is reported. Now Lucy, who was about to take her kids to that park for lunch, knows that she needs to be careful. When she checks BaySpace a few hours later, she sees that the incident has been resolved by the DPW.

BaySpace- community driven information, presented on a sleek and easy to use platform.

- Find us here: <http://ec2-54-215-173-150.us-west-1.compute.amazonaws.com/>

List of Functions

- 1. Search problems in parks and open spaces**
- 2. Browse problems for park locations**
- 3. Images of parks**
- 4. Map of park locations**
- 5. Login/register**
- 6. Post problems**
- 7. Admin change the status of the aforementioned problems**
- 8. Captcha for registration and posting problems - for safety measure**
- 9. List of current posts**
- 10. Number of current posts for each park**

II. Milestone documents

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
Revised: 07/03/2019

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. This will also be beneficial to city managers, as they will be able to see new and current issues.

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:

Client - Viewing/Posting

Admin- Viewing/Managing/Resolving

1. Client- Checking App

Age: 19

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 goes online, and opens the BaySpace website. She types in the name of the park, 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: 30

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. He goes onto the BaySpace website, and decides to post the issue. He is prompted to register, and then he is able to post pictures and a description.

3. Client- Checking Website

Age: 60

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: 40

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 an 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 website; Will submit a ticket

- Client: Viewing/Posting/Getting Information
- Admin Client: Viewing/Reviewing/Solving Issues

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

- A ticket has location, type of problem, status and resolve

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

Priority 1:

A. Unregistered User

1. Search Function

All users shall be able to search the park by park name, park number or zip code.

This function is available for every status of user.

2. Browse

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

3. Name and image of the park

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

4. Advanced search

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

5. Map

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

B. Registered User

6. Register/Login

Only registered users will be able to login to the website. New users will have the option to register.

7. Post

Registered user shall be able to post the environmental issue of the park.

8. Profile

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

C. Admin

9. Change the status of the post

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

10. Admin

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

Priority 2:

A. Unregistered User

11. CAPTCHA

Register and login shall have CAPTCHA to prevent automated attacks.

12. Current issue/post

All users shall be able to see all the current environmental issue/post.

13. Sort

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

14. Number of current issue

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

B. Registered User

15. Image or Video attachments

Registered user shall be able to attach images or videos in their posts.

16. Able to pin location of the issue

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

C. Admin

Priority 3:

A. Unregistered User

17. Tutorial

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

B. Registered User

18. Recent view/search

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

19. 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.

20. Rating

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

C. Admin

V. Non-Functional Requirements

- I. 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 server.
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
- II. 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. Modern 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	BaySpace
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

SW Engineering CSC

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Milestone 2

07/10/2019

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: 07/12/2019
Revised: 07/13/2019

I. Data Definitions V2

1. Client

Someone using the application; Will submit a ticket

- Registered Client: Viewing/Posting/Getting Information
- Unregistered Client: Viewing/Getting Info
- Admin Client: Viewing/Reviewing/Solving Issues

2. Admin

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

3. Ticket

A submitted Issue onto the website

Information included in a ticket

Issue: Name of the issue for the ticket

- Categories: Oil spill, fire, leak, etc..

Location: Where the issue arose

Time: What time it was spotted/ticket was opened

Description: Details of the issue, not required

Rating: How urgent the issue is

Status: Progress of issue being resolved

User: The client who submitted the ticket, can be anonymous

4. Crew

DPW/City Worker team sent out

5. DPW

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

6. Status

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

7. Recent

A catalogue of "Current and in Progress" & "Past Posts"

8. Events

A calendar of events happening in the available parks

9. Map

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

10. Tips

A List of suggestions on how to be environmentally conscious

11. Park Profile

A page that includes all information about selected park. Including recent tickets, events, and map.

12. User Registration Record

A record of registered users

13. Admin Approval Page

An admin only page, with list of all tickets- including their status. Gives Admin ability to approve posts, delegate a team, rate the severity of issue, and change status as the issue is resolved.

II. Functional Requirements V2

Priority 1:

A. Unregistered User

1. Search Function

All users shall be able to search the park by park name, park number or zip code.

This function is available for every status of user.

2. Browse

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

3. Name and image of the surrounding parks and open spaces

The website shall display the name and image of the park in order for easy search of surrounding areas

4. Map

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

5. Register/Login

Only registered users will be able to login to the website. New users will have the option to register.

6. CAPTCHA

Register and login shall have CAPTCHA to prevent automated attacks.

7. Current issue/post

All users shall be able to see all the current environmental issue/post.

8. Sort

User shall be able to sort the post based on time, category, relevance.

9. Number of current issue

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

B. Registered User

10. Post

Registered user shall be able to post the environmental issue of the park.

C. Admin

11. Change the status of the post

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

12. Admin

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

Priority 2:

A. Unregistered User

13. Advanced search

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

B. Registered User

14. Image or Video attachments

Registered user shall be able to attach images or videos in their posts.

15. Profile

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

16. Able to pin location of the issue

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

C. Admin

Priority 3:

A. Unregistered User

17. Tutorial

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

B. Registered User

18. Recent view/search

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

19. 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.

20. Rating

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

C. Admin

III. UI Mockups and Storyboards

Unregistered Clients

1. Unregistered Client: Checking Website

Age: 19

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

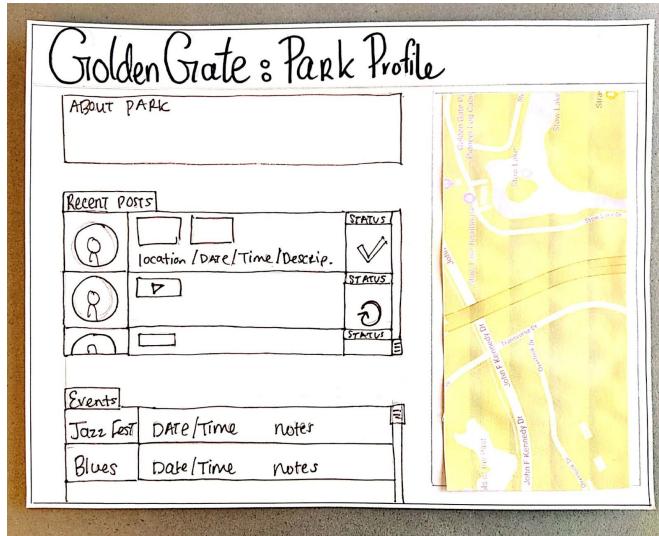
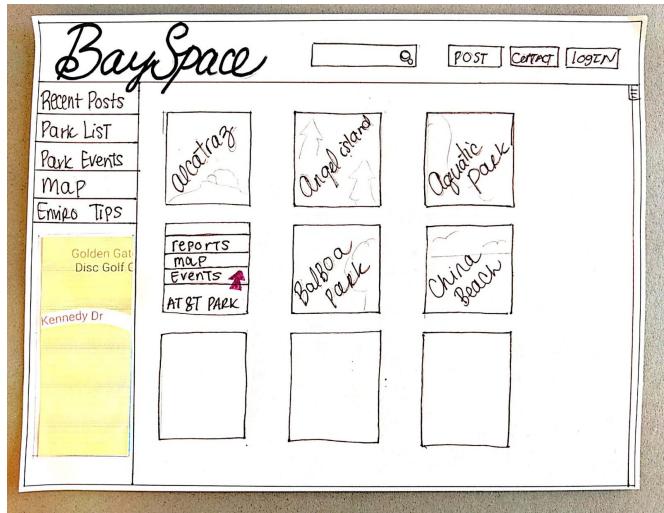


Name: Sophia

- 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 website. On the homepage, she searches for the nearest park to her. Once she is on the Park Profile Page, she notices a current issue that is being resolved. She decides to take the children to a different park, just to be safe.
-



2. Unregistered Client: Checking Website + Posting

Age: 70

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

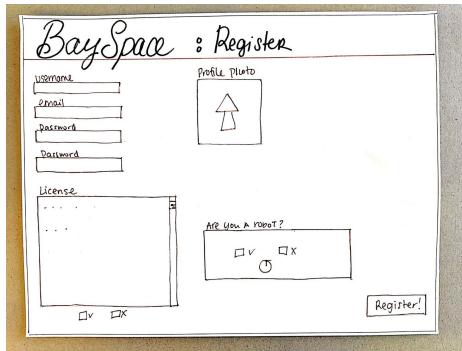
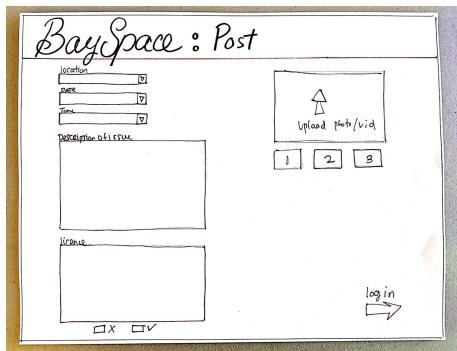
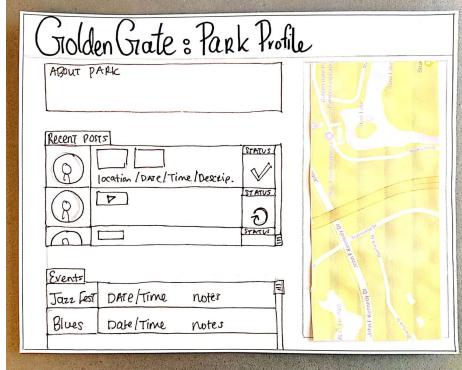
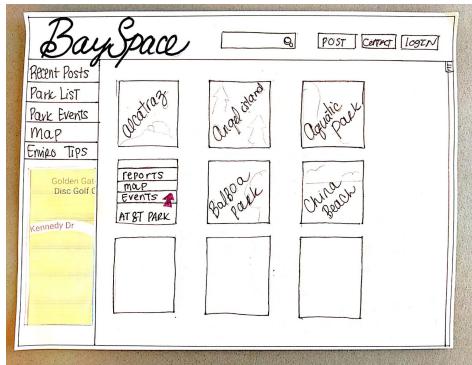


Name: Lewis

- 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. While he is doing his research in Golden Gate Park, he notices that an issue has occurred. On the BaySpace website, he takes a few pictures, a short video of the damage, enters the time and location of the incident, and when he taps on submit, he is asked to register. He creates a profile with his name, email, password and profile picture. He adds a short description of who he is. Then, after he saves, his issue is officially submitted for review.



Browse Site (Non-Registered User)

Use Case Name:	Client browses site for environmental issues Scenario: Client wants to check a nearby park
Summary:	This use case allows a non-registered person to browse
Basic Flow:	<ol style="list-style-type: none"> 1. The use case starts when a client decided to check whether the park nearby has any issues 2. The client opens the BaySpace website 3. They are able to search for the park they want to check, or can scroll through our “Top Park Gallery” 4. The click on the park they are interested in, and the Park Profile opens up 5. On the park profile page, they are able to see recent tickets, their status, and the description of any issues. 6. Once they check the website, they can decide whether to go to the park or not
Alternative Flows:	Step 7: If client goes to park, and decides to post, must register.
Extension Points:	-
Preconditions :	There are no pre-conditions to browsing
Postconditions:	-
Business Rules:	Some data and functions are restricted to certain types of users or users with a particular access level.

Registered Clients

3. Registered Client: Posting on Website

Age: 27

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

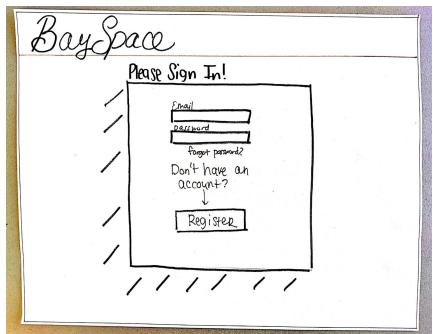
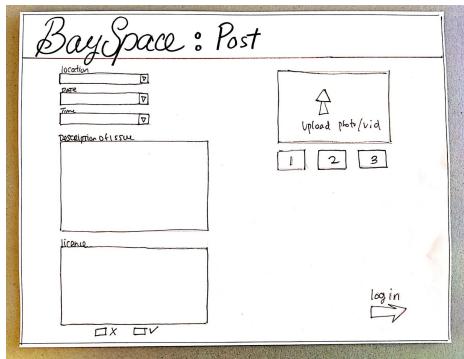
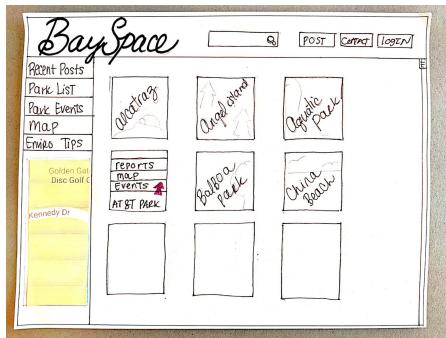


Name: Mark

- 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. He opens the BaySpace website on his mobile phone. He taps on "Post Issue." He takes a picture of the incident, comments the environmental hazards, adds the time and location, and taps submit. He is prompted to login, which he does with his Google email and password.



Post (Registered Client)

Use Case Name:	Post Scenario: Client posts a ticket
Summary:	This use case is for a registered client posting
Basic Flow:	<ol style="list-style-type: none"> 1. Client notices an issue at a park. 2. Client decides to report said issue. 3. They open the BaySpace Website 4. The click on the button that says “Report” to open a ticket 5. On report page, they are prompted to enter location, time, description of issue, and a few photographs. 6. On the next page, they are prompted to login, using a lazy login. 7. Once they login, the ticket is submitted to the admin
Alternative Flows:	<p>Step 8: Once they reach the login page, if the client is not registered, he is not able to post. He/She is prompted to login and register.</p> <p>Step 9: After registering, client has the ability to post</p>
Extension Points:	-
Preconditions :	The customer is logged in, or has a registered account. Otherwise, they are willing to open an account.
Postconditions:	The site is updated to show the new issue once approved by the admin.
Business Rules:	

Admin

4. Admin/DPW worker: Checking App

Age: 40

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

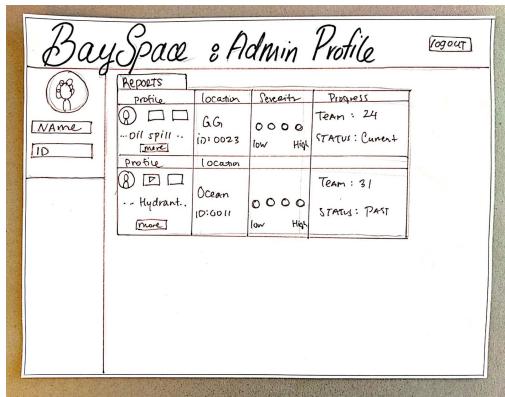
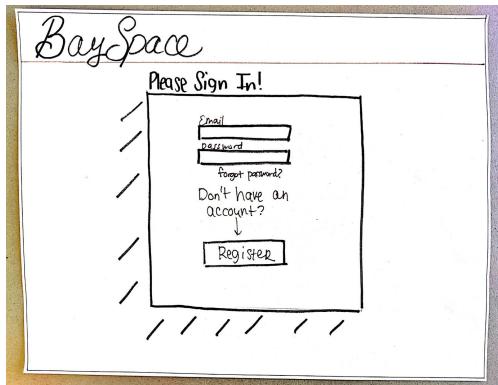
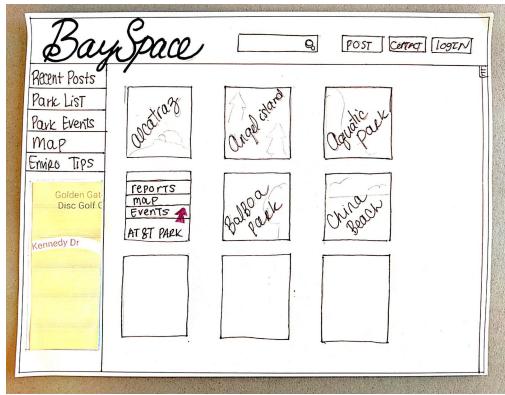


Name: Katie

- 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.



Admin (Registered, all access)

Use Case Name:	Admin looks at posts, delegates workforce Scenario: User needs to validate any new issues, check status on “in progress” and close solved issues.
Summary:	This use case allows an administrator to validate new posts, delegate a workforce, change status, and close ticket.
Basic Flow:	<ol style="list-style-type: none">1. The user logs into their admin account.2. They are able to see a log of new tickets, with location, photos, time, and the profile that posted the ticket.3. They look through the images and description4. They are able to enter the severity of the problem5. Then, they delegate a DPW team to the location to aid in the environmental issue6. Admin then changes the status of the issue.7. Once the issue is resolved, admin can post an update, update the status, and close the ticket.
Alternative Flows:	-
Extension Points:	-
Preconditions :	Must have admin access
Postcondition s:	-
Business Rules:	No data and functions are restricted

IV. High level Architecture, Database Organization

Main database schema: team5app

Tables: ticket, user, location

Columns:

1. ticket: id (INT), issue (VARCHAR), location (VARCHAR, foreign key), status (ENUM), description (VARCHAR), rating (INT), time (DATETIME), user (VARCHAR, foreign key)
2. user: username (VARCHAR), password (encrypted), email (VARCHAR), create_time (DATETIME)
3. location: name (VARCHAR)

Location names:

Alcatraz Island
Angel Island
Aquatic Park
AT&T Park
Balboa Park
China Beach
Fort Funston
Fort Mason
Fort Miley
Glen Canyon Park
Golden Gate Park
Japanese Tea Garden
Lake Merced
Lands End

Mount Sutro Forest
Muir Woods
Ocean Beach
South Park
The Presidio
Twin Peaks
Union Square

Media storage: Files shall be stored on server file system with relative path.

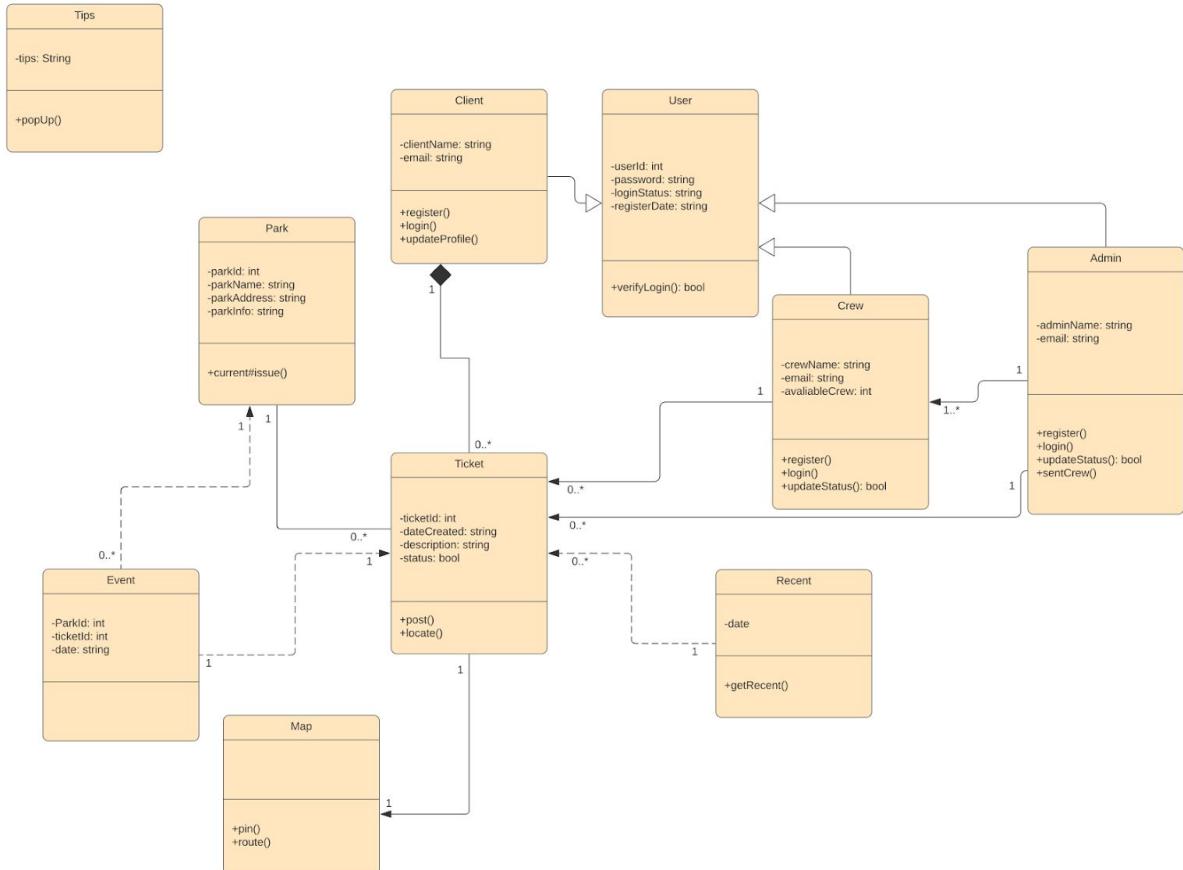
Search: Search query shall use MySQL %LIKE and apply to selected category such as issue name or location. Can also filter by status (ie. only show Open tickets). Search shall fetch data from the tickets table.

Custom APIs: None so far

Non-trivial algorithms: Open and in progress tickets shown up front, then sorted by recent. Closed tickets hidden and are optionally viewable.

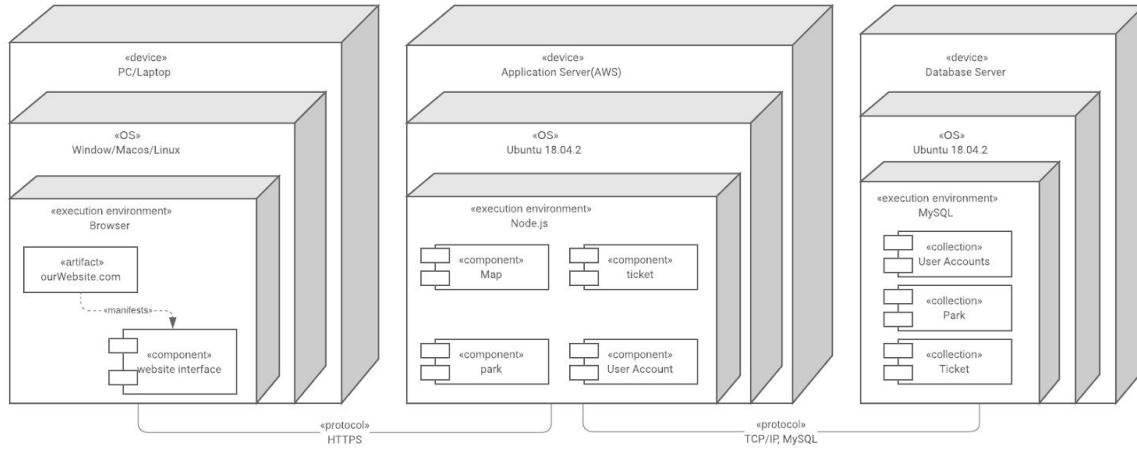
SW Tools/Frameworks: NodeJS with Express. Handlebars for NodeJS view engine. MySQL for database. PM2 to keep NodeJS deployment running even after server reboot.

V. High Level UML Diagrams



- User class is an abstract class. Client, crew and admin is a generalization of the user class.
- A client able to post many ticket and a ticket belong to only one client. all ticket will delete if the client account is deleted.
- An admin and crew can handle many ticket.
- An admin must have at least one crew to manage.
- Every ticket will have a map to locate the issue.
- Every Ticket associate to a park and a park can have zero or more ticket.
- Event class shows the current issue happen in each park depends on the park id.
- Recent class shows the ticket depends on the create date of the ticket.

UML Deployment Diagram



VI. Risks

Skill risks - New to NodeJS and MySQL: CSC 317 is a new course that should cover databases and none of us has taken it. We shall learn these topics as quickly as possible using online resources and resources provided by professor.

Schedule risks - Summer session is short and many of us have non-school related duties.

Technical risks - Unexpected hardware crash causes lost work. There may be rare cases of AWS server outage which causes our deployment to go offline.

Teamwork risks - Everyone has a different focus on the project and very little knowledge of each other's focus. For example, front-end has no idea what goes on in backend and vice versa.

Legal/content risks - We shall use only MIT content, Creative Commons content, open-sourced content, or content created by us directly.

VII. Project management

To successfully complete Milestone 2 we had short in person meetings to discuss our plans and progress for our project and MileStone 2. These meetings would consist of creating a game plan of what needs to be taken care of, who will do what, and to bring up any concerns with the direction we are heading for this project. After having an in person meeting, we then set up a Trello dashboard to assign tasks to each person on the team and to keep track of the progress. Trello helped us reach our Milestone 2 deadlines in an efficient manner. Another tool that helped us communicate with each other on the team and collaborate together was Slack. Using Slack we were able to keep each other updated with our progress, check in with each other, and ask questions. Slack was a fantastic communication tool in helping us complete Milestone 2.

Moving forward we plan on keeping this same format as it has been working for us thus far and has proven to be efficient. We will continue with having in person meetings after classes, use Trello to keep track of our Milestone's status and to assign tasks, as well as use Slack to communicate with each other on the team.

BaySpace



BaySpace: M3 + CheckPoint

08/03/2019

Initial Submission: 08/02/2019
Revised: 08/05/2019

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

Home Page

Menu

SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home

Recent Posts

Park List

Park Events

Map

About

BaySpace

Search for an incident... All Issues All Locations Search

Sign In Register

List of locations

Alcatraz Island	Angel Island	Aquatic Park	AT&T Park
Balboa Park	China Beach	Fort Funston	Fort Mason

Search Page

Menu

SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home Recent Posts Park List Park Events Map About

BaySpace Search for an incident... All Issues All Locations Search Sign In Register

Search results

Showing 2 results

Image	Details	Submitted by	Status
A photograph of Alcatraz Island, showing the prison buildings and the surrounding water.	Issue Fire Location Alcatraz Island Rating 3 Description no details More Details	anonymous 2019-08-10 15:19:46	In Progress
A photograph of Alcatraz Island, showing the prison buildings and the surrounding water.	Issue Combustion Gas Location Alcatraz Island Rating 3 Description no details More Details	anonymous 2019-08-10 15:19:38	Open

Results Page

Menu

Home

Recent Posts

Park List

Park Events

Map

About

SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

BaySpace Search for an incident... All Issues All Locations Search Sign In Register

Search results

Showing 2 results

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A photograph of Alcatraz Island, showing the prison buildings and surrounding water.	Issue Combustion Gas Location Alcatraz Island Rating 3 Description no details More Details	anonymous 2019-08-10 15:19:38	Open

Details Page

Menu

SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home Search for an incident... All Issues All Locations Search Sign In Register

Details for ticket

Ticket id: 12



Issue	Heavy Snowfall
Location	Angel Island
Rating	4
Description	no details
Submitted by User	anonymous
Submitted at time	2019-08-10 15:19:55
Status of ticket	Closed

Login Page

Menu SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home BaySpace Search for an incident... All Issues All Locations Search Sign In Register

Recent Posts

Park List

Park Events

Map

About

We'll never share your email with anyone else.

Email address *

Enter email

Password *

Password

Remember me

Sign In

Registration Page

Menu SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home BaySpace Search for an incident... All Issues All Locations Search Sign In Register

Recent Posts

Park List

Park Events

Map

About

Registration

* indicates required fields

First Name *

Last Name *

Username *

Email address *

Enter email

We'll never share your email with anyone else.

Password *

Confirm Password *

I agree to the Terms of Service and Privacy Policy. *

I'm not a robot  reCAPTCHA Privacy Terms

Please validate reCAPTCHA before submitting

Sign Up

Post Page

BaySpace

Search issues in local parks Search issue, location, or desc All Issues All Locations

Post Sign In Register

Home

Search

Tickets

About

Recent Posts

Park List

Park Events

Map

Post a ticket by filling out this form

Issue Location Description Rating Browse... No file selected.

Viewing all tickets

Image	Details	Submitted by	Status
	Issue Flood Location Lake Merced Rating 4 Description Bad flood	anonymous 2019-07-31 14:05:28	Open
	Issue Ebola Location Alcatraz Island Rating 2 Description no details	anonymous 2019-07-23 10:33:27	Open
	Issue Combustion Gas Location Angel Island Rating 4 Description no details	anonymous 2019-07-23 17:18:28	Open
	Issue Fire Location Alcatraz Island Rating 5 Description This is a very long description. Descriptions can take up a lot of space. LOOOOOOOOOOOOOOOOOOOONG DESCRIPTION. Fires at alcatraz island please evacuate and do not come back!!	anonymous 2019-07-23 17:55:47	Open

Functional Requirements V3

Priority 1:

A. Unregistered User

1. Search Function

All users shall be able to search the park by park name, park number or zip code.
This function is available for every status of user.

2. Browse

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

3. Name and image of the surrounding parks and open spaces

The website shall display the name and image of the park in order for easy search of surrounding areas

4. Map

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

5. Register/Login

Only registered users will be able to login to the website. New users will have the option to register.

6. CAPTCHA

Register and login shall have CAPTCHA to prevent automated attacks.

7. Current issue/post

All users shall be able to see all the current environmental issue/post.

8. Sort

User shall be able to sort the post based on time, category, relevance.

9. Number of current issue

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

B. Registered User

10. **Post**

Registered user shall be able to post the environmental issue of the park.

C. Admin

11. **Change the status of the post**

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

12. **Admin**

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

Priority 2:

A. Unregistered User

13. **Advanced search**

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

B. Registered User

14. **Image or Video attachments**

Registered user shall be able to attach images or videos in their posts.

15. **Profile**

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

16. **Able to pin location of the issue**

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

C. Admin

Priority 3:

A. Unregistered User

17. **Tutorial**

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

B. Registered User

18. **Recent view/search**

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

19. **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.

20. **Rating**

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

C. Admin

Summary of Feedback

Vertical prototype notes-

Homepage does not look good

Toggle menu - Bad.

90% - check, report, toggle menu for later

Too much on profile, right hand side - has all the extras, main thing has the reports and map

Like google - details! Different pop up

Can put map in the report page

Maybe: Priority 1.5 - admin page

Search-

Filters: refer to search results.

Then filter again.

Example:

Search bar = filter + /pull down (location and incident)

Then second filter - date or time or status - filter on results

For Database-

Category and status have to be separate

User table?

Homepage-

Recent instead of alphabetical home page - go through location table and choose whatever representative is. So recent posts

For log- in and registration

Forgot password, remember me, mark whether fields are mandatory, Captcha, force to agree to license

For code style- Header comments!! Must have it. Purpose, Name, what it is, etc.

Master branch is not development - so we need one branch that integrates front and back. Then everything is pushed onto Master

For security - password encrypt, make sure server images are secure, validate search field.

SW Engineering CSC

648/848 Summer 2019

Milestone 4: BaySpace

08/2/2019

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: 08/06/2019
Revised: 08/09/2019

BaySpace



1) Product summary

Who is this product for? The target audience for this application are people from any age range, and all walks of life. Any person or group that wants to know what is going on in a nearby open-space, park or beach - this is for you.

What are the product's basic details? BaySpace is a neat, sleek, information packed home for all things environmental. Made for outdoorsy people, by outdoorsy people, we know exactly what you worry about when going outside. With BaySpace, planning your outdoor adventure is easy.

Where would someone use this product? At home, outside, in your car, at work; anywhere in the Bay Area - we got you.

When should someone use the product? Want to check on a previous oil spill? Make sure the park you are taking your kids to has no problems? That the beach near you has no recent reports?

Why is this product useful or better than its competitors? Sleek, fast, and info-packed. We bring you the environmental scoop as soon as it is reported, and update as soon as it is resolved. Everything you need in one place, all you need to do is check.

How does the product work? Let's say you walk past your favorite park, and spot a busted fire hydrant. Water everywhere, flooding the playground. You log onto BaySpace, and with a few quick clicks, the incident is reported. Now Lucy, who was about to take her kids to that park for lunch, knows that she needs to be careful. When she checks BaySpace a few hours later, she sees that the incident has been resolved by the DPW.

BaySpace- community driven information, presented on a sleek and easy to use platform.

- Find us here: <http://ec2-54-215-173-150.us-west-1.compute.amazonaws.com/>

List of Functions

- 1. Search problems in parks and open spaces**
- 2. Browse problems fro park locations**
- 3. Images of parks**
- 4. Map of park locations**
- 5. Login/register**
- 6. Post problems**
- 7. Admin change the status of the aforementioned problems**
- 8. Captcha for registration and posting problems - for safety measure**
- 9. List of current posts**
- 10. Number of current posts for each park**

2) Usability test plan – 2 pages

Test Objectives:

The objective of this test is to illustrate how the search function interfaces usable our current environmental issue in the search box and finding the result that is looking by the users. Our test on this function is that we want the users how fast they are able to find the search box on our home page and how easily they can search their environmental issues in the search box as soon as they start typing their concerns or using the issue category. Also how we want to test how understandable the error message is when the users try to find irrelevant search or incorrectly typing during their search.

Test Plan:

A. System Setup:

Computer: MacBook Pro

Browser: Google Chrome Browser V.75

Operating system: macOS Mojave 10.4

B. Starting point:

the Home Page of BaySpace

C. Intended User:

Any user could be registered or unregistered who wants to know the environmental issue.

D. Usability Task description:

Find parks with fires.

Completion Criteria:

The user typed fire in the search box and clicking the search button to find the result in the database and successfully found that fire issue was in Alcatraz Island.

The user has completed this task within 1 minute.

E. Url to Test System:

<http://ec2-54-215-173-150.us-west-1.compute.amazonaws.com/>

localhost:3000

- Lickert subjective test:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I found the search bar is easy to use. (Check one)					
I found the search category match my needs. (Check one)					
I found the search result useful to me. (Check one)					

Please leave any additional comments here:

3) QA test plan - max 2 pages

3. QA Test Plan

3.1 Test Objectives

The objective of the QA test is to thoroughly test the search function of BaySpace in order to ensure that the search results display issues relevant to the search query. Searching by issue name, location name and percent like(name of the park or description) will be tested.

3.2 System Setup

Processor: Intel(R) Core(TM) i5-7300u cpu @ 2.60ghz

RAM: 16 GB

Operating System: Windows 10 Professional 64-bit Laptop

Browser 1: Google Chrome Version Version 75.0.3770.142

Browser 2: Microsoft Edge 42.17134.10

3.3 Feature to be Tested

This QA test will test the functionality of the search function from all of BaySpace major pages: home page, search result page, park detail page, collectively hereinafter “Testing Pages.” The test will test for the following Expected Functionality:

- The search result page shall show all issues that match the search query (the search query being either an issue name, location name, and description), as well as the number of found issues.
- All results should be readable and openable.
- The search query shall not disappear from the search box after searching.
- All issues shall include an Issue Type, Park Name, Rating, Description, Author and Status.
- All results shall be the same across both browsers.

3.4 Test Cases

3.4.1 Test 1 – Search with Location drop down menu.

Select Alcatraz Island on the Location drop down menu and click search. Validate that every Expected Functionality is met. If all of the Expected Functionality is met, the test result shall be PASS. Perform the search on both browsers.

3.4.2 Test 2 – Searching with Issue drop down

Select Ebola on the drop down of All Issue and click search. Validate that every Expected Functionality is met. If all of the Expected Functionality is met, the test result shall be PASS. Perform the search on both browsers.

3.4.3 Test 3 – Searching with percent like

Enter Angel and click search. Validate that every Expected Functionality is met. If all of the Expected Functionality is met, the test result shall be PASS. Perform the search on both browsers.

1. Google Chrome

Test #	Test Title	Test description	Test input	Expected correct output	Test result
1	Search with Location	Test if the search work with Location drop down menu	Select Alcatraz Island on the drop down of All Location and enter search	Check if there are 3 results; Are they all related to Alcatraz	PASS +
2	Search with Issue	Test if the search work with Issue drop down menu	Select Ebola on the drop down of All Issue and click search	Check if there is 1 result, has ebola in ticket details	PASS +
3	Search with percent like	Test if the search work with input	Enter Angel and click search	Check if there is 1 result, and if it is related to Angel Island	PASS +

2. Microsoft Edge

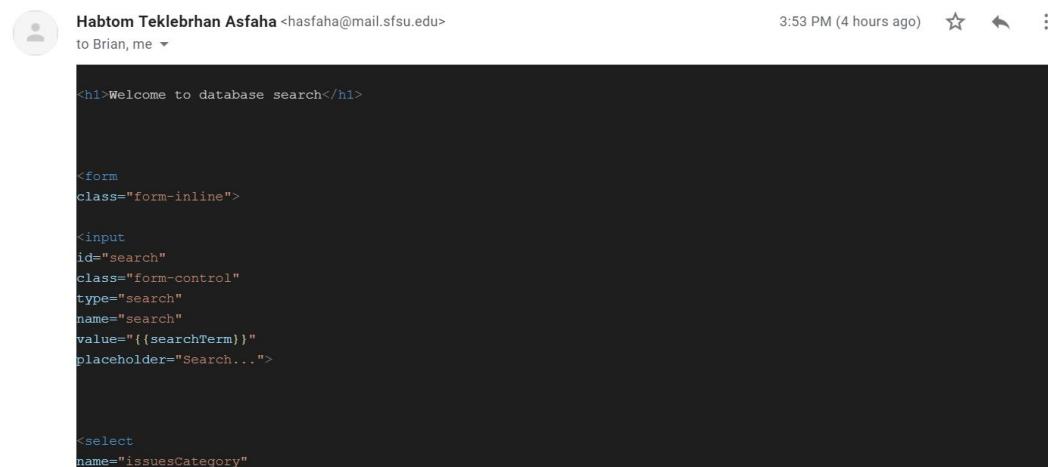
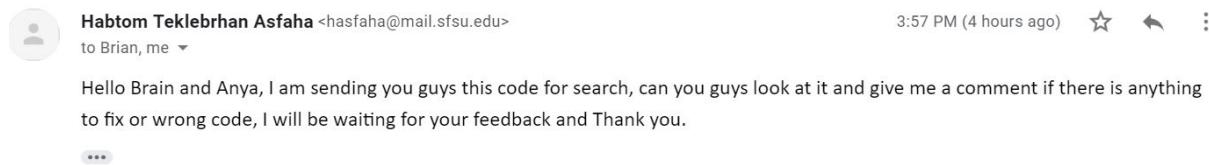
Test #	Test Title	Test description	Test input	Expected correct output	Test result
1	Search with Location + Issue	Test if the search work with Location drop down + Issue drop down menu	Select Alcatraz Island on the drop down of All Location and enter search	Check that if there are more than 1 result; does the result have Alcatraz details	PASS +
2	Search with Issue	Test if the search work with Issue drop down menu	Select Ebola on the drop down of All Issue and click search	Check that if there is 1 result; that is has Ebola related detail	PASS +
3	Search with percent like	Test if the search work with input	Enter Angel and click search	Check if there is 1 result, and if it is related to Angel Island	PASS +

4) Code Review:

Coding style

1. 2 spaces for indentation (HTML, CSS, JavaScript, Handlebars)
2. Opening brace on same line (JavaScript, CSS)
3. Closing brace on new line (JavaScript, CSS)
4. Space after keywords like "if", "else", etc (JavaScript)
5. Use arrow functions for callback functions (JavaScript)
6. Header comments use block comment (JavaScript)
7. Comments inside code use “// ”, notice the space “//” (JavaScript)
8. Comments indented to the same level as context (All languages)
9. Comments have spaces before and after “`<!-- some comment -->`”, notice the spaces “`<!-- some comment -->`” (HTML, Handlebars)
10. Empty line between each class block (CSS)

Screenshots of code review process





Brian Hoang Lai <blai2@mail.sfsu.edu>
to Habtom, me ▾

4:23 PM (4 hours ago) ☆ ⏪ ⏴

Hello Habtom,

Thank you for sending in your HTML code of the search function for code review.

A few things I want to point out:

1. Hopefully your code is actually formatted correctly with the right amount of spaces for indentation. I assume sending the code through email has destroyed all formatting and everything is slammed to the left.
2. We may want the search functionality to be in the navbar so it will have to be moved to layout.hbs. The table of results will stay in its separate file: search.hbs.

Time for the code review:

1. The form tag is missing the method and action properties. It needs to have method="post" and action="/search".
2. For the table of search results, we need a better way of formatting the columns. Having a column for each field is a bit too excessive.

Here are my proposed changes:

search.hbs

1. Here is the new code for search.hbs. The form for the search functionality has been moved to layout.hbs as it will be living in the navbar. Submitting that form will route to this search page that shows results. You may also find new code from back-end. Please leave those be as back-end has also been making progress.

2. `<h1>Search results</h1>`

```
<!-- Print any messages that is passed in from back-end such as "No results found" -->
<h4>
{{#if msg}}
{{msg}}
{{else}}
<!-- Print number of results or if no search query was submitted, prompt user to enter search -->
{{#if numResults}}
Showing <strong>{{numResults}}</strong> results
{{else}}
Please enter search term and/or search categories
{{/if}}
{{/if}}
</h4>
```



Brian Hoang Lai <blai2@mail.sfsu.edu>
to Habtom, me ▾

4:26 PM (4 hours ago)



Additionally, please write header comments for search.hbs.

I have provided an example you may use. Feel free to add on to it

```
<!-- Front-end body for search results page -->
<!-- This page is accessed by submitting the search form at the top of the site in the navbar -->
```

5) Self-check on best practices for security

Major assets being protected:

1. User passwords - hash encrypted with salt
2. Database tables - images stored as relative path, not BLOBs
3. Registration and login - field validation and captcha
4. Image upload - captcha and image formats only, file size limit of 10 MB

Passwords:

Passwords are encrypted in the database when a user registers for an account. The passwords will appear in the database as a long hash string. This is done on the server side by using a NodeJS library called “bcrypt”. Bcrypt is a password hashing function that uses a salt to protect against rainbow table attacks. Bcrypt is an adaptive function so the iteration count can be increased to make it slower over time. Therefore, bcrypt remains resistant to brute-force search attacks even with increasing computing power.

Field Validation:

All input fields in the registration and sign-in forms are validated and required. Additionally, a captcha is required to be verified upon submitting the forms, there is no exception to this. This prevents spam bots from registering fake accounts on the website. When adding a ticket, the add ticket form includes issue name, location name, and rating fields which are all required and validated. There are two additional fields that are optional which are description and upload image. A captcha is also required to be verified when submitting a ticket to prevent upload spam. Lastly, the search bar is validated to be 0-50 alphanumeric characters. When left blank, search results will include every ticket. We used a NodeJS library called “express-validator” to validate fields. Express validator is a set of express.js middleware that wraps validator.js, which is a library that provides validator and sanitary functions. Express validator is incorporated into our app to perform server-sided field validation.

6) Self-check: Adherence to original Non-functional specs

Copy all original non-functional specs as in high level application document published at the very beginning of the class. Then for each say either: DONE if it is done; ON TRACK if it is in the process of being done and you are sure it will be completed on time; or ISSUE meaning you have some problems and then explain it.

Note: you must adhere to all original non-functional specs as published in the original high level specification document. Failure to do so may cause reduced SE Product grade

1. 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).
DONE
2. Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of two major browsers
DONE
3. Selected application functions must render well on mobile devices
DONE
4. Data shall be stored in the team's chosen database technology on the team's deployment sewer.
DONE
5. No more than 50 concurrent users shall be accessing the application at any time
 - ON TRACK
6. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
 - ON TRACK
7. The language used shall be English.
DONE
8. Application shall be very easy to use and intuitive.
 - ON TRACK
9. Google analytics shall be added
 - ON TRACK

10. No email clients shall be allowed (Clients with no email can log in, aka non-reg user)
 - ON TRACK
11. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated.
DONE
12. Site security: basic best practices shall be applied (as covered in the class)
DONE
13. Before posted live, all content (e.g. apartment listings and images) must be approved by site administrator
 - ON TRACK
14. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development
 - ON TRACK
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).
DONE

III. Screen Shots

Home Page

← → ⓘ Not secure | ec2-54-215-173-150.us-west-1.compute.amazonaws.com

SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

BaySpace Search for an incident... All Issues All Locations Search Sign In Register

Find your BaySpace

Environmental Reports, Near You

A photograph of Alcatraz Island, showing the old prison buildings and a water tower on a rocky shore.

A photograph of Angel Island, showing a coastal landscape with trees and a view of the San Francisco skyline across the water.

A photograph of an aquatic park with several water slides and people swimming in a large pool.

A photograph of AT&T Park, a baseball stadium filled with spectators, with the city skyline visible in the background.

An illustration or rendering of Balboa Park, showing a green lawn, trees, and people walking.

A photograph of China Beach, showing waves crashing onto a rocky shoreline with the Golden Gate Bridge in the background.

A photograph of Fort Funston, showing a rocky coastline with a small, mossy rock formation in the water.

An aerial photograph of Fort Mason, showing a long building with a red roof and surrounding infrastructure.

A photograph of several cacti plants.

A photograph of palm trees.

A photograph of the Palace of Fine Arts, a white, tent-like structure.

Park List Page

Menu SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home BaySpace Search for an incident... All Issues All Locations Search Welcome, Anna! Post Sign out

Park List

Map

About

Tickets (admin)

Find your BaySpace

Environmental Reports, Near You

Alcatraz Island	Angel Island	Aquatic Park	AT&T Park
Balboa Park	China Beach	Fort Funston	Fort Mason
Golden Gate Bridge and trees	Lands End	Muir Woods	Pier 39

Map Page

← → ⌂ Not secure | ec2-54-215-173-150.us-west-1.compute.amazonaws.com/map

SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

BaySpace Search for an incident... All Issues All Locations Search Sign In Register

Map of locations

CSC 648 Team 5

The map displays a dense network of roads and highways, including major routes like Interstate 80 (I-80), Interstate 580 (I-580), and Interstate 280 (I-280). It also shows several state routes (SR) and local roads. Numerous green areas represent parks and regional preserves, such as the Golden Gate National Recreation Area, Mt. Tamalpais Watershed, and various parks in the East Bay and Peninsula. The map covers a wide area from the Farallon Islands to Antioch and includes labels for many cities and towns.

Issues List Page



List of locations

Location	Number of tickets
Alcatraz Island	4
Angel Island	2
Aquatic Park	0
AT&T Park	3
Balboa Park	3
China Beach	2
Fort Funston	2
Fort Mason	1
Fort Miley	1
Glen Canyon Park	1
Golden Gate Park	6
Japanese Tea Garden	1
Lake Merced	2
Lands End	2
Mount Sutro Forest	1
Muir Woods	0
Ocean Beach	2
South Park	1
The Presidio	1
Twin Peaks	1
Union Square	0

Park Profile Page

BaySpace Search for an incident... All Issues All Locations Search Sign In Register

Location information

Location: Alcatraz Island



List of all issues at this location

Image	Details	Submitted by	Status
	Issue Fire Location Alcatraz Island Rating 4 Description no details More Details	anli 2019-08-13 16:25:51	Open
	Issue Pollen Location Alcatraz Island Rating 1 Description help allergies	anonymous 2019-08-13 15:53:09	Open

About Team Page

Menu SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home BaySpace Search for an incident... All Issues All Locations Search Sign In Register

Park List

Map

About

About

Software Engineering class SFSU

Summer 2019

Section 01

Team 05

Team members



Anwar

[Learn more](#)







Search Results

Menu

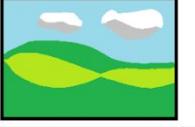
SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home Park List Map About

BaySpace oil spill All Issues All Locations Search Sign In Register

Search results

Showing 8 results

Image	Details	Submitted by	Status
	Issue Oil Spill Location China Beach Rating 5 Description no details	blai30 2019-08-13 19:23:49	Open
	Issue Oil Spill Location Balboa Park Rating 5 Description no details	anonymous 2019-08-13 19:22:07	Open
	Issue Oil Spill Location Golden Gate Park Rating 2 Description oil spilled by tanker	ahalteh 2019-08-13 16:46:39	In Progress
	Issue Toxic Waste Location Golden Gate Park Rating 3 Description oil spilled by tanker	ahalteh 2019-08-13 16:45:32	In Progress

Registration Page

Menu

SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

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BaySpace

Search for an incident...

All Issues

All Locations

Sign In Register

Registration

* indicates required fields

First Name *

Last Name *

Username *

Email address *

We'll never share your email with anyone else.

Password *

Confirm Password *

I agree to the Terms of Service and Privacy Policy. *

I'm not a robot  reCAPTCHA
Privacy - Terms

Please validate reCAPTCHA before submitting

Sign-in Page

Menu

SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home BaySpace Search for an incident... All Issues All Locations Search

Park List Sign In Register

Map

About

Sign in

* indicates required fields

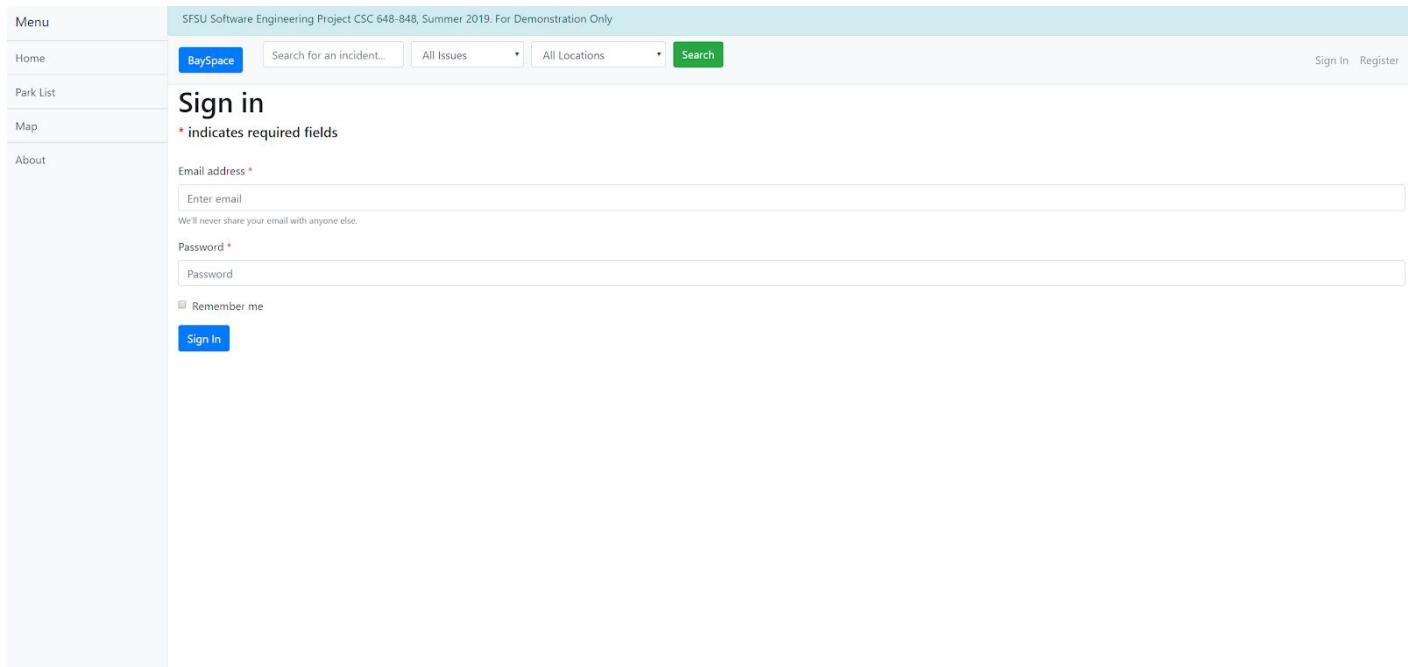
Email address *

We'll never share your email with anyone else.

Password *

Remember me

Sign In



Client Home Page

Menu SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home BaySpace Search for an incident... All Issues All Locations Search Welcome, Anna! Post Sign out

Park List

Map

About

Tickets (admin)

Find your BaySpace

Environmental Reports, Near You

Alcatraz Island	Angel Island	Aquatic Park	AT&T Park
Balboa Park	China Beach	Fort Funston	Fort Mason
Forest Area	Hillside View	White Building	Traditional Building

Post Page

Menu SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home BaySpace Search for an incident... All Issues All Locations Search Welcome, Anna! Post Sign out

Park List

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About

Tickets (admin)

Post a ticket by filling out this form

* indicates required fields

Select issue type *

Issue

Select location of issue *

Location

Briefly describe the issue

Description

Rate the level of danger (1-least dangerous, 5-most dangerous) *

Rating

Upload image

Choose File No file chosen

Post anonymously

I'm not a robot  reCAPTCHA Privacy Terms

Please validate reCAPTCHA before submitting

Add Ticket

User Profile

Menu SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home Search for an incident... All Issues All Locations Search Welcome, Anna! Post Sign out

Park List

Map

About

Tickets (admin)

User profile

Username: anli

First Name: Anna
Last Name: Livshyts

List of all tickets submitted by this user

Image	Details	Submitted by	Status
	Issue Nuclear Waste Location Glen Canyon Park Rating 5 Description There is nuclear waste More Details	anli 2019-08-13 20:19:55	Open
	Issue Heavy Snowfall Location Golden Gate Park Rating 2 Description Why is there snow in SF? More Details	anli 2019-08-13 19:33:54	Open
	Issue Nuclear Waste Location Fort Funston Rating 5 Description There is nuclear waste More Details	anli 2019-08-13 19:31:01	Open

Admin Page

Menu SFSU Software Engineering Project CSC 648-848, Summer 2019. For Demonstration Only

Home BaySpace Search for an incident... All Issues All Locations Search Welcome, Anna! Post Sign out

Park List

Map

About

Tickets (admin)

Admin page for tickets

Table of tickets

Image	Details	Submitted by	Status	Delete
	Issue Nuclear Waste Location Glen Canyon Park Rating 5 Description There is nuclear waste More Details	anli 2019-08-13 20:19:55	Open ▾	Delete Ticket
	Issue Thunderstorms Location Lake Merced Rating 3 Description Thunder!!! More Details	Justin 2019-08-13 19:50:01	Open ▾	Delete Ticket
	Issue Heavy Snowfall Location Golden Gate Park Rating 2 Description Why is there snow in SF? More Details	anli 2019-08-13 19:33:54	Open ▾	Delete Ticket
	Issue Nuclear Waste Location Fort Funston Rating 5 Description There is nuclear waste More Details	anli 2019-08-13 19:31:01	Open ▾	Delete Ticket

IV. Screen shots of key DB tables

Users on Database:

The screenshot shows the MySQL Workbench interface. On the left, the 'SCHEMAS' tree shows 'sys' and 'team5app'. Under 'team5app', 'Tables' include 'image', 'issue', 'location', 'rank', 'ticket', and 'user'. 'rank' is selected, and its 'Columns' are listed: id, firstName, lastName, userName, email, and password. Below this is the 'Object Info' tab. The main area displays the 'Result Grid' for the query 'SELECT * FROM user;'. The grid shows 6 rows of data. A sidebar on the right contains icons for 'Result Grid', 'Form Editor', and 'Field Types'. At the bottom, the 'Action Output' pane shows three log entries for queries executed by 'user 7'.

	id	firstName	lastName	userName	email	password
1	Kaga	Akagi	AzurLane	azur@la.ne	\$2a\$10\$wWDgYVuMvUm/SH5opYxog.jwdo0M.	
2	Joe	Schmack	jschmack1995	joeschmack@yahoo.com	\$2a\$10\$Ao6CwJybyc1qWqhxEuTPU4iB.	
3	Brian	Lai	blai30	blai2@mail.sfsu.edu	\$2a\$10\$wx2Cj0zCc3UqguT6eRc3OZ3JjfN7r.	
4	Anna	Livshyts	anli	anyalivshyts@gmail.com	\$2a\$10\$lh2uCcYkP9H5H2WUyiy03OxtN0WZL.	
5	Habtom	Asfaha	Habtom2	asfahah2@gmail.com	\$2a\$10\$29L/.3q15uH03ml4jMAvguW8HupmQz.	
6	Anwar	Halteh	ahalteh	ahalteh@mail.sfsu.edu	NULL	
HULL	NULL	NULL	NULL	NULL	NULL	

Table: rank

Columns:

id	int(11) PK
rankName	varchar(45)

Action Output

Time	Action	Response	Duration / Fetch Time
16:14:40	SELECT * FROM rank LIMIT...	4 row(s) returned	0.0070 sec / 0.00001...
16:14:56	SELECT * FROM ticket LI...	4 row(s) returned	0.011 sec / 0.000021...
16:15:08	SELECT * FROM user LI...	5 row(s) returned	0.017 sec / 0.000023...

Ranks System on Database

The screenshot shows the MySQL Workbench interface with the following details:

- Schemas:** team5app
- Tables:** rank
- Columns:**
 - id**: int(11) PK
 - rankName**: varchar(45)
- Result Grid:** Displays the data from the query `SELECT * FROM rank;`. The results are:

id	rankName
1	Unregistered
2	Registered
3	City
4	Admin
NULL	NULL

- Action Output:** Shows the history of recent database actions.

Time	Action	Response	Duration / Fetch Time
16:14:09	SELECT * FROM issue LIM...	17 row(s) returned	0.0069 sec / 0.00001...
16:14:25	SELECT * FROM location...	21 row(s) returned	0.038 sec / 0.000022...
16:14:40	SELECT * FROM rank LIMI...	4 row(s) returned	0.0070 sec / 0.00001...

Images on Database

The screenshot shows the MySQL Workbench interface with the following details:

- Schemas:** sys, team5app
- Tables:** image, issue, location, rank, ticket, user
- Selected Table:** image
- Columns:**
 - id:** int(11) AI PK
 - imageName:** varchar(45)
 - imagePath:** varchar(45)
 - imageType:** varchar(45)
- Result Grid:** Displays 4 rows of data:

	id	imageName	imagePath	imageType
▶	0	noimage	uploads/noimage.png	.png
▶	13	uploadImage-1565475578627.jpg	uploads/uploadImage-1565475578627.jpg	.jpg
▶	14	uploadImage-1565475586091.jpg	uploads/uploadImage-1565475586091.jpg	.jpg
▶	15	uploadImage-1565475595629.jpg	uploads/uploadImage-1565475595629.jpg	.jpg
	NULL	NULL	NULL	NULL
- Action Output:** Shows three recent actions:

Action	Time	Response	Duration / Fetch Time
8	16:14:56	SELECT * FROM ticket Li...	4 row(s) returned 0.011 sec / 0.000021...
9	16:15:08	SELECT * FROM user LIMI...	5 row(s) returned 0.017 sec / 0.000023...
10	16:45:02	SELECT * FROM image LI...	4 row(s) returned 0.0078 sec / 0.00023...

Tickets on Database

Schemas

Filter objects

sys

team5app

Tables

image

issue

location

rank

ticket

user

Columns

- id
- firstName
- lastName
- userName
- email
- password

Object Info Session

Table: **Image**

Columns:

Id	int(11) AI	
	PK	
imageName	varchar(45)	
imagePath	varchar(45)	
imageType	varchar(45)	

Result Grid

1 • `SELECT * FROM ticket;`

100% 21:1

	id	issue_id	location_id	status	description	rating	time	user_id	image_id	
▶	10	1	1	Open	no details	3	2019-08-10 15:19:38	NULL	13	
	11	6	1	In Progress	no details	3	2019-08-10 15:19:46	NULL	14	
	12	8	2	Closed	no details	4	2019-08-10 15:19:55	NULL	15	
	13	11	7	Open	no details	1	2019-08-10 15:20:04	NULL	0	
	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	

Result Grid Form Editor Field Types

ticket 2

Action Output

	Time	Action	Response	Duration / Fetch Time
2	15:53:22	SELECT * FROM user LIMI...	3 row(s) returned	0.0067 sec / 0.00001...
3	15:53:36	SELECT * FROM location...	21 row(s) returned	0.0071 sec / 0.00001...
4	16:13:19	SELECT * FROM ticket Li...	4 row(s) returned	0.013 sec / 0.000030...

Apply Revert

Issues on Database:

The screenshot shows the MySQL Workbench interface with the following details:

- Schemas:** sys, team5app
- Tables:** image, issue, location, rank, ticket, user
- Selected Table:** issue
- Result Grid:** Displays 17 rows of data from the issue table.
- Columns:** id, issueName
- Action Output:** Shows three recent actions with their times and descriptions.

Action	Time	Description	Duration / Fetch Time
9	16:15:08	SELECT * FROM user LIMIT 1	0.017 sec / 0.000023...
10	16:45:02	SELECT * FROM image LIMIT 1	0.0078 sec / 0.00023...
11	14:23:09	SELECT * FROM issue LIMIT 1	0.013 sec / 0.000016...

(locations listed on database)

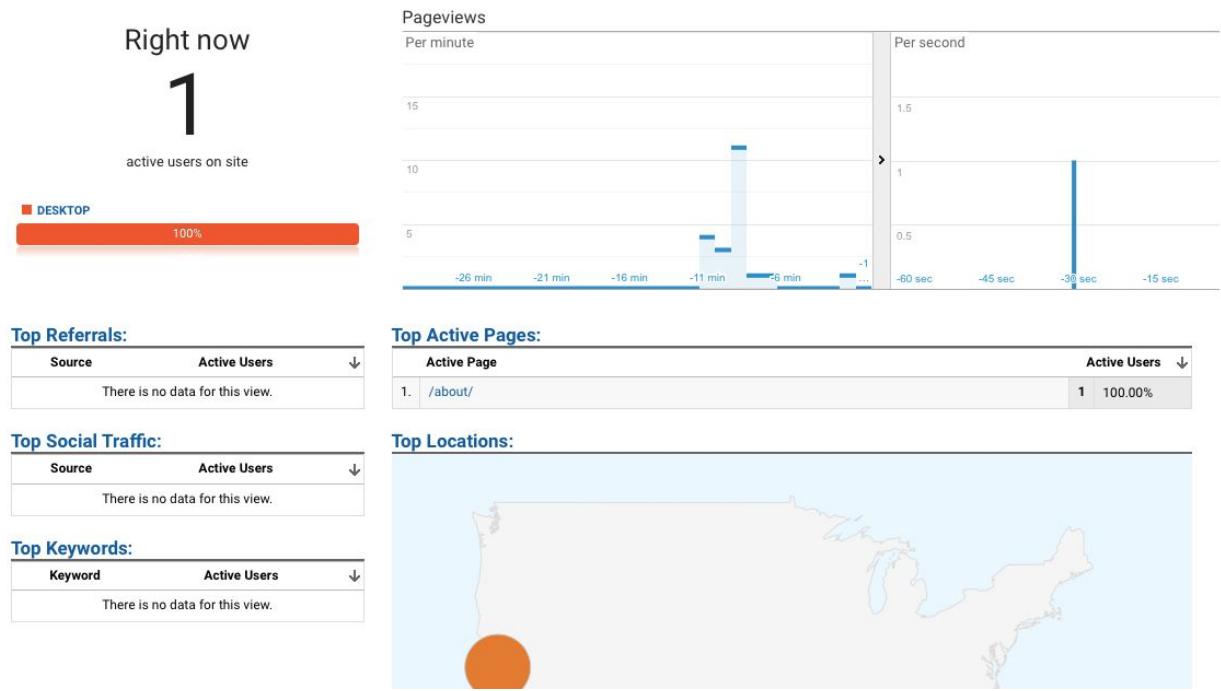
The screenshot shows the MySQL Workbench interface with the following details:

- Schemas:** sys, team5app
- Tables:** image, issue, location
- location Table Data:**

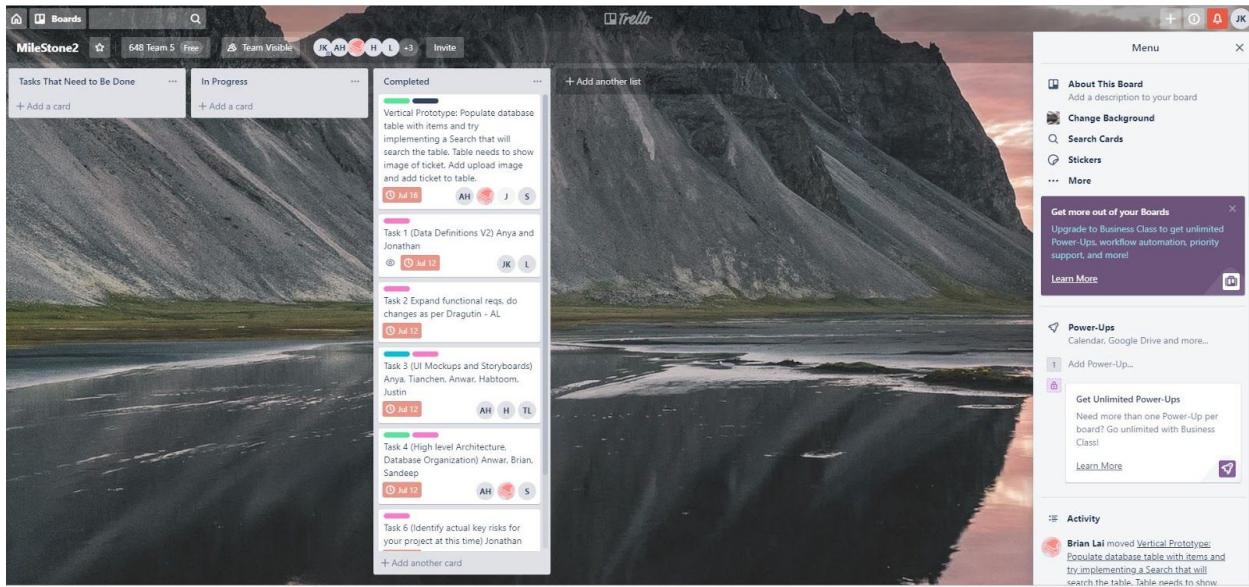
	id	locationName	imagePath	urlRoute
▶	1	Alcatraz Island	img/locations/alcatrazIsland.jpg	alcatrazIsland
	2	Angel Island	img/locations/angellsIsland.jpg	angellsIsland
	3	Aquatic Park	img/locations/aquaticPark.jpg	aquaticPark
	4	AT&T Park	img/locations/attPark.jpg	attPark
	5	Balboa Park	img/locations/balboaPark.jpg	balboaPark
	6	China Beach	img/locations/chinaBeach.jpg	chinaBeach
	7	Fort Funston	img/locations/fortFunston.jpg	fortFunston
	8	Fort Mason	img/locations/fortMason.jpg	fortMason
	9	Fort Miley	img/locations/fortMiley.jpg	fortMiley
	10	Glen Canyon Park	img/locations/glenCanyonPark.jpg	glenCanyonPark
	11	Golden Gate Park	img/locations/goldenGatePark.jpg	goldenGatePark
	12	Japanese Tea Garden	img/locations/japaneseteaGarden.jpg	japaneseteaGarden
- Action Output:**

Action	Time	Response	Duration / Fetch Time
SELECT * FROM issue LIMIT...	14:23:09	17 row(s) returned	0.013 sec / 0.000016...
SELECT * FROM rank LIMIT...	14:23:28	4 row(s) returned	0.012 sec / 0.000010...
SELECT * FROM location...	14:40:04	21 row(s) returned	0.020 sec / 0.00005...

V. Google analytics plot for your WWW site (1 page)



VI. Screen shot



We used a Trello board for Milestones to assign tasks to each team member, and keep track of where each task stands. We used Slack for quick communication and problem solving.

#csc-648-project

Ahalteh 3:35 PM
thats what i was thinking

Justin Zhu 3:36 PM
Should we delete the park event tab or is any one working on it

Brian Lai 3:37 PM
add this code to app.js

```
// THIS GOES AT THE TOP UNDER ALL THE require LINES
const got = require('got');

// THE REST GOES SOMEWHERE AFTER app = express();
app.enable('trust proxy');

// The following environment variable is set by app.yaml when running on App
// Engine, but will need to be set manually when running locally. See README.md.
const {GA_TRACKING_ID} = process.env;

const trackEvent = (category, action, label, value) => {
  const data = {
    // API Version.
    v: '1',
    // Tracking ID / Property ID.
    tid: GA_TRACKING_ID,
    // Anonymous Client Identifier. Ideally, this should be a UUID that
    // is associated with particular user device or browser instance
}
```

VII. Team member contributions

Team Lead: Jonathan Kaldani (jkaldani@mail.sfsu.edu)

Commits: 8-10 (Github glitch)

The screenshot shows an Outlook email window with the following details:

Subject: CSC 648 Team 5 Contributions by Jonathan Kaldani

From: Jonathan Rukni Kaldani (jkaldani@gmail.com)

Date: Tue 8/13/2019 10:04 PM

To: Anwar Bassam Halteh; Brian Hoang Lai; Habtom Teklebrhan Asfaha; Sandeep Dhakal; Tianchen Liu; Anna B Livshyts

Cc: Jonathan Kaldani <jonathankaldani@gmail.com>

Message Content:

Dear Team,

This is Jonathan Kaldani. My role in the team is being the team lead.

Here is a list of my contributions.

- Organize and schedule meetings
- Create teams (back end and front end)
- Assign tasks
- Review all milestone documents and plans for back end and front end
- Single point of contact with instructors
- Project Manager for the team
- Created Trello boards and assigned tasks for each milestone
- Contributed to Milestone documents
- Work with team members to make sure all deadlines are met
- Debugging / Testing site (QA)
- Apply feedback given from instructors into project and work with team members to successfully do so

Number of commits: 8 (More than 8 commits were submitted on my behalf but those commits are under unknown user when I committed code changes for some odd reason)

Thank you,

Jonathan R. Kaldani

Github Master: Brian Lai

Commits: 145

Mail - Anna B Livshyts - Outlook - Google Chrome
outlook.office.com/mail/deeplink?version=2019080502.16&popoutv2=1

Reply all | Delete | Junk | Block | ...

CSC 648 Team 5 Contributions by Brian Lai

 Brian Hoang Lai
Tue 8/13/2019 8:24 PM
Jonathan Rukni Kaldani; Anwar Bassam Halteh; Brian Hoang Lai; Habtom Teklebrhan Asfaha +4 others ▾

Dear Team 05,

This is Brian Lai. My role in the team is GitHub Master. Here is a list of my contributions:

- Code review
- Managing GitHub branches and merging, restricted access to master branch
- Set up NodeJS and all necessary dependencies on the AWS server instance
- Wrote instructions for database, server login, and general information in README.md files
- Configured NodeJS development environment
- Configured database tables
- Helped with all milestone documents
- My own about page
- Initial front-end code using NodeJS view engine called handlebars (.hbs)
- Front-end code for maps page
- Front-end code for sign in and registration pages
- Front-end code for search results
- Front-end code for locations page, ticket details page, user profile page, tickets administration page
- Front-end code for about page (top level about page that shows all team members)
- Back-end code for image uploads
- Back-end code for search function
- Back-end code for posting a ticket
- Back-end code for administration (deleting ticket, updating ticket status)
- Back-end code for sign in and registration, cannot register if email/username exists in database
- Back-end code for field validation on sign in/registration forms and search bar
- Back-end code for password encryption
- Back-end code for embedded Google Maps which shows all park locations
- Back-end code for reCAPTCHA verification

Anya Livshyts (Front End Lead)

Commits: 14

The screenshot shows an Outlook email window with the following details:

- Title Bar:** Mail - Anna B Livshyts - Outlook - Google Chrome
- Address Bar:** outlook.office.com/mail/deeplink?version=2019080502.16&popoutv2=1
- Toolbar:** Reply all | Delete | Junk | Block | ...
- Subject:** Re: CSC 648 Team 5 Anya Livshyts Contributions
- Text Content:**

Sent: Tuesday, August 13, 2019 8:46 PM
To: Jonathan Rukni Kaldani <jkaldani@mail.sfsu.edu>; Brian Hoang Lai <blai2@mail.sfsu.edu>; Tianchen Liu <tliu6@mail.sfsu.edu>; Sandeep Dhakal <sdhakal@mail.sfsu.edu>; Habtom Teklebrhan Asfaha <hasfaha@mail.sfsu.edu>; Haifeng Zhu <hzhu2@mail.sfsu.edu>; Anwar Bassam Halteh <ahalteh@mail.sfsu.edu>
Subject: CSC 648 Team 5 Anya Livshyts Contributions

Dear Team,

Anya here, front-end lead. Here are my contributions:

 - Organization of communications
 - Oversaw all Milestone steps (from start to submission)
 - Created all Milestone Documents
 - Corrected all information for Milestones
 - Created Mock-ups/Designs for every WWW page
 - Used feedback from CEO to change documentation/direction of project
 - Debugging / Testing site (QA)
 - Worked on home page and profile page (not used in final design)
 - Managed direction/look of website
 - Created own about page
 - Helped with team management

Please let me know what you think,

Anya.

Tianchen Liu

Commits: 4

The screenshot shows an Outlook email interface. The subject of the email is "Re: CSC 648 Team 5 Anya Livshyts Contributions". The sender is "Tianchen Liu" (represented by a circular profile picture with "TL" initials). The email was sent on "Tue 8/13/2019 10:31 PM". The recipient is "outlook.office.com/mail/deeplink?version=2019080502.16&popoutv2=1". The message content starts with "Dear Team 05," followed by "Tianchen here, front-end Dev. Here are my contributions:" and a bulleted list of tasks completed.

TL
Tianchen Liu
Tue 8/13/2019 10:31 PM
outlook.office.com/mail/deeplink?version=2019080502.16&popoutv2=1

✉ Reply all | ⏪ Delete ⏪ Junk ⏪ Block ⏪ ...

Re: CSC 648 Team 5 Anya Livshyts Contributions

Tianchen Liu
Tue 8/13/2019 10:31 PM
Anna B Livshyts; Jonathan Rukni Kaldani; Brian Hoang Lai; Sandeep Dhakal +3 others ⏪

Dear Team 05,

Tianchen here, front-end Dev. Here are my contributions:

- Milestone Documents
- Created Mock-ups/Designs for HomePage and frame
- Used feedback from CEO to change the pages
- Debugging / Testing site
- Created usability testing/lickert test
- Created own about page
- Created frame and homepage for further development

Tianchen.

Habtom Asfaha

Commits: 8

The screenshot shows an Outlook email window with the following details:

- Subject:** CSC 648 Team 5 Habtom Asfaha 's contributions
- From:** Habtom Teklebrhan Asfaha (HA)
- Date:** Tue 8/13/2019 11:25 PM
- To:** Jonathan Kaldani <jonathankaldani@gmail.com>; Anna B Livshyts; Anwar Bassam Halteh +4 others
- Message Content:**

Dear Team,

This is Habtom Asfaha, front-end dev. Here are my contributions:

 - worked with all Milestones
 - Writing a functional requirement for the website
 - Created Mock-ups/Designs for all pages
 - Created own about page
 - worked on Homepage
 - worked on Sign-in page
 - Created a Usability Test Plan and Task description
 - Debugging / Testing site

Thank you,

Habtom Asfaha

Anwar Halteh (Back End Team Lead)

Commits: 20



Edbtz commented 1 hour ago

Author



Dear Team 05,

This is Anwar Halteh. My role in the team is Back End Team Lead. Here is a list of my contributions

Setting up and maintaining EC2 server
helped with image upload on backend team
delegated tasks based on priority and solved issues that needed immediate attention
uploaded all about pages onto server
propagated locations, issues, users, and images to MySQL database
ran Scrum meetings for backend team
communicated with front end lead and team lead to get pages up to spec
set up Google Analytics
checked backend code as well as front end flaws
monitored progress towards goals
conflict management in backend
Motivated team members
organization, planning, and scheduling of back end assignments
setting up Ubuntu server
data organization

...

On Aug 13, 2019, at 3:45 PM, Brian Lai ***@***.***> wrote:

Justin Zhu

Commits: 11

Mail - Anna B Livshyts - Outlook - Google Chrome

outlook.office.com/mail/deeplink?version=2019080502.16&popoutv2=1

Reply all | Delete | Junk | Block | ...

CSC 648 Team 5 Contributions by Justin Zhu

 Haifeng Zhu
Tue 8/13/2019 8:59 PM
Jonathan Rukni Kaldani; Anwar Bassam Halteh; Brian Hoang Lai; Habtom Teklebrhan Asfaha +3 others

Dear Team 05,

This is Justin Zhu. My role in the team is Back-end team member.

Here is a list of my contributions:

a)

- Functional Spec
- UML- Class diagram
- UML- Deployment and Component diagram
- QA test plan
- Self-check
- Adjust Website Format
- My about page
- Testing site

b)

- 10 commits

Thank you,

Justin Zhu

Sandeep Dhakal

Commits: 7

The screenshot shows an Outlook email window with the following details:

- Subject:** CSC648 Team 5 Contributions
- From:** Sandeep Dhakal (SD)
- Date:** Tue 8/13/2019 10:35 PM
- To:** Jonathan Kaldani <jonathankaldani@gmail.com>; Anna B Livshyts; Brian Hoang Lai +4 others
- Message Content:**

Dear team 05,
This is Sandeep Dhakal, and my role in the team was a back-end team member. First of all, it was my pleasure to work with you guys as much as it was a great learning curve for me to work in the team environment. As the back-end member I helped and did anything asked by our team lead and the front-end lead. For the milestone zero I made the about page as done by the all group member. For milestone one I wrote the non-functional requirements for the website. It was one of the fundamental requirements for the website. For milestone two I helped in making the UML diagram also helped in creating the vertical prototype. Milestone three was all about getting reviews from Prof. D. Petkovic and improving our website, for this I went with the team and we had great discussion session. In milestone four I helped on QA test plan and Usability test plan. Moreover, I had seven commits on the master and couple more on the branch.
Thank you all and pleasure was all mine.

VIII. Post analysis

The screenshot shows an Outlook email window with the following details:

- Subject:** Post Analysis Lessons Learned
- From:** Jonathan Rukni Kaldani (JK)
- Date:** Tue 8/13/2019 11:33 PM
- To:** Anwar Bassam Halteh; Habtom Teklebrhan Asfaha; Haifeng Zhu; Tianchen Liu; Brian Hoang Lai; Anna B Livshyts; Sandeep Dhakal
- Message Content:**

Hi Team,

Here is a summary of some of the lessons learned and challenges I found for this project:

Overall working on this project was a lot of fun. It was great to see how working together as a large group we were able to create an awesome product at the end. Working as a team did however come with its challenges and lessons learned.

Some of the main challenges that we discovered was that having a large team it was somewhat challenging. Sure, it was awesome to have more hands on deck however what we found to be more difficult was that having a large team it required more planning.

Planning included who would do what, and making sure that there was no overlap in assigned work. Another challenge we found was keeping track of what everyone is doing.

Next time we would address these challenges by dividing and assigning tasks very early in the milestone process so that everyone can get a headstart and so everyone knows very early in the process what is required of them to complete.

Thank you,

Jonathan Kaldani

Overall working on this project was a lot of fun. It was great to see how working together as a large group we were able to create an awesome product at the end. Working as a team did however come with its challenges and lessons learned.

Some of the main challenges that we discovered was that having a large team it was somewhat challenging. Sure, it was awesome to have more hands on deck however what we found to be more difficult was that having a large team it required more planning. Planning included who would do what, and making sure that there was no overlap in assigned work. Another challenge we found was keeping track of what everyone is doing.

Next time we would address these challenges by dividing and assigning tasks very early in the milestone process so that everyone can get a headstart and so everyone knows very early in the process what is required of them to complete.