

Milestone 3

Team Name: Code Exterminators

Project Name: Campus Snapshots

Team Number: 15

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History Table

Revision Number	Revision Date	Description
1	November 4, 2019	Initial Version

Executive Summary

Many students whether they live on campus or commute rely on the facilities provided on campus including dining locations, the library, recreational facilities, dormitories, parking areas, and classrooms. Additionally, campus administration must respond to the needs of students and ensure that these facilities adequately provide for the students and are properly maintained. When these services are not maintained well it can negatively impact students and leave them dissatisfied with the operation of the university.

In order to provide for the needs of both students and administration we propose Campus Snapshots as a platform for providing up to date information regarding issues and events on campus. The purpose of this platform will be to keep university administration update on the current status of campus and problems affecting students. It will also provide a means for students to point out problems that they notice on campus and seek a resolution to them. Problems intended to be reported on the platform include issues such as broken AC, clogged toilets, full trash bins, or other utilities on campus in disrepair. However, usage will not be limited to simply reporting issues. Students will also be able to post information about positive events and activities on campus such as informal student get togethers in order to foster a greater sense of community.

The intention of Campus Snapshots is to improve the quality of service provided by the campus and allow for issues to be quickly and accurately identified. We also hope that this service will create a greater sense of community between students and administration by allowing them to cooperate on creating a better environment on campus. Students should be able to see real results when they report issues that they encounter by having them resolved in a timely manner and campus administration can be confident that they have an accurate view of the current state of the campus.

Competitive analysis

X	Allows Users to make Posts.	Allows Users to create Events.	Allows Users to report other User content.	Allows Users to create Report Posts/Threads.	Allows Users to send Direct Messages to other Users.	Dedicated report tracking and management team
Facebook	Yes	Yes	Yes	Yes (through Facebook Help Community)	Yes	Yes
Twitter	Yes	No	Yes	No	Yes	Yes
Campus Snapshots	Yes	Yes	Yes	Yes	No	Yes

Although features such as creating posts and events would not be unique to Campus Snapshots, the simplicity (e.g. no extraneous features such as Direct Messaging) and much more student-specific functions (e.g. taking pictures of on-campus problems to report or creating an event page for other students) of Campus Snapshots will make it much more appealing to university students/faculty compared to generic social media applications like Facebook and Twitter.

Data definition

Post - A user submission containing a location, short description and an image reporting an issue or informing about an event on campus. Reports have an associated state indicating if they have not been addressed, are in the process of being resolved, or have been resolved. Events have an associated state indicating if they are upcoming, in-progress, or finished. Images used for posts have a maximum size of 4 MB.

Comment - A text response to a post

Report Queue - A list of student, teacher, or faculty reports filterable by their current state from open to close or whether its flagged.

Administrative Queue - A list of posts flagged by users as containing content in violation of the rules of the platform.

Flagged - item deemed unfit for posting based on preset content administrative guidelines or relevance

Event Queue - A list of events filterable by their state ranging from planned, ongoing, cancelled, finished, or flagged.

User - Any account that is created and subsequently used. A User is also either a Normal User or a Staff User. Users have a username, full name (first, last, and middle initial), password and email address.

Normal User - An account created by a university student, professor, or faculty. Normal Users only have permissions to make, view, and comment on posts. Normal Users also have the ability to manage their own posts such as deleting them and modifying the status of their event posts.

Staff User - An account created by a Campus Snapshot staff member. Staff Users have administrative privileges (such as removing posts, suspension, and banning) over Normal Users.

Overview, scenarios and use cases

In order to use Campus Snapshots users will require access to and basic knowledge of a smartphone or computer. The interface will present the required information to make a post on the platform to users as well as content guidelines. Campus staff will require minimal training (at most 2 hours) on how to manage the posts on the website using the report and administrative queues as well as any staff regulations and content guidelines. Sample use cases are presented below.

1. A student notices the trash bin in a bathroom is full. They take a picture of the trash bin and post it to the website along with the location of the issues they are reporting and a brief description of the problem.
2. A campus staff member checks the report queue and sees a report regarding a water fountain not functioning properly. They inform the relevant maintenance personnel of the issues and mark the report as being worked on along with a comment. Later, upon receiving word that the water fountain has been fixed a staff member selects the associated report from the queue and marks it as done.
3. A user makes a post containing inappropriate content on the website. Another user notices the posts and reports it for violating the content guidelines. A campus staff member views the administration queue and confirms that the reported post should not be on the platform. The staff member notes down the information of the user who made the post to be forwarded to any relevant administrative personnel and deletes the post from public view.
4. A group of students are hosting a small event to attract new members to their student organization. They make a post with a picture of the event along with its location and a description of the event to the website to inform other students of its existence. Upon completion of the event, the student who made the posts marks it as complete or it is later automatically removed.

High-level functional requirements

1. All Users can create profiles through a username and password.
 - 1.1 Normal Users will register by providing a username, password, email address, and full name
 - 1.2 Staff Users will have their accounts created by the site administrators

Priority: 1

2. All Users can create public posts (consisting of text and images) that are visible to all other users.

Priority: 1

3. Normal Users can create report posts (consisting of text and images) that are visible to Staff Users in the report queue.

3.1 Users must provide an image related to the issue they are reporting along with the location of the issues, a title, and a description

Priority: 1

4. All Users can comment on another User's post.

Priority: 2

5. A User can see the status of their report (reported, in process, and resolved)

Priority: 1

6. All Users can create public events, which other Users can join, that end after a certain period of time or end after being closed by a Staff User.

6.1 Users must specify a time and date range for when their event will occur along with an image, title, location, and description.

Priority: 1

7. All Users can Flag other posts which contain inappropriate content and send it to the Administration Queue.

Priority: 2

8. Staff Users can impose authority over Normal Users as described in the definition of a Staff User.

Priority: 2

9. Staff Users can view and modify a report queue which consists of pending and in process Normal Users reports.

Priority: 1

10. Staff Users can view a log which contains all resolved reports within the past month.

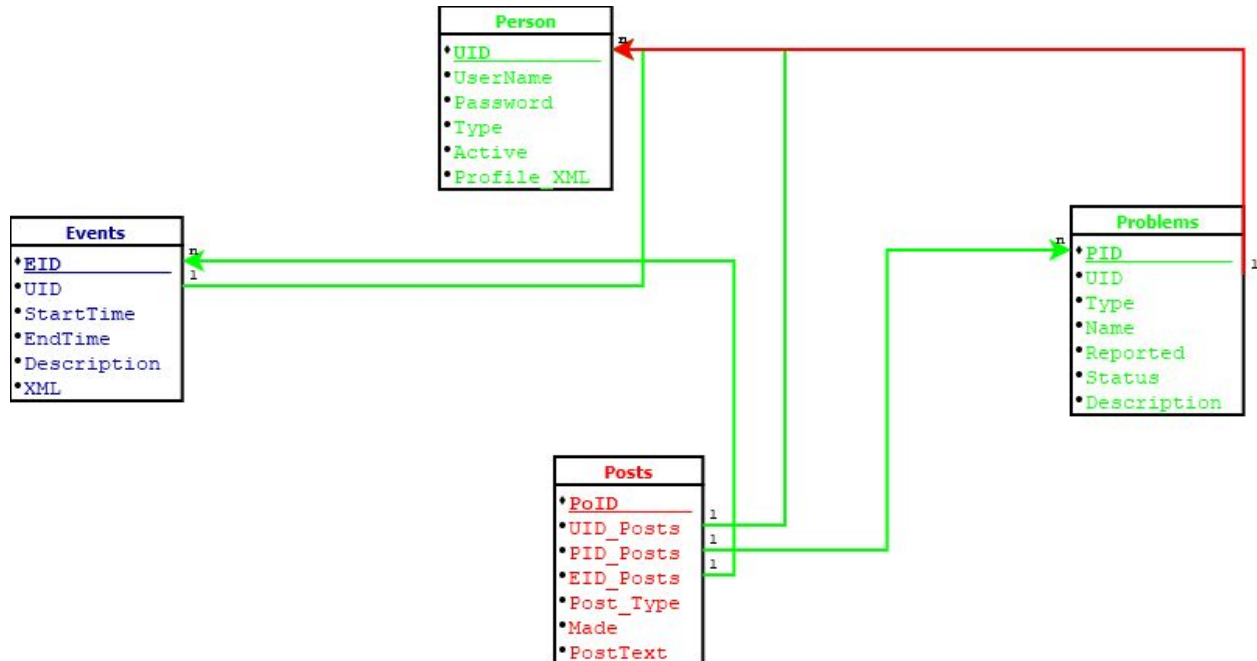
Priority: 2

List of non-functional requirements

1. System should be able to react without error to several people posting at once
2. Common users should not be able to easily access another user's accounts or modify the webpage in anyway except to add their own content.
3. Users are expected to be logged out automatically after leaving the page or after 15 minutes of inactivity
4. An update to a post's status is expected to appear within five seconds of change (without reload)
5. User's status is expected to be persistent through reload but data is not
6. Posts are expected to be sorted according to a form of priority or relevance. Additionally the order is consistent among users
7. Functions are available based on user designation
8. Data is expected to be backed up monthly, prior to any changes to current log
9. Variables are to be hidden from user
10. User data and User profiles are expected to be separate entities

High-level system architecture and database organization

DB organization:



Media storage:

Images will be stored in filesystem with a reference to them kept in the database.

Search/filter architecture and implementation:

Reports and Events will be filtered based on state and sorted in reverse chronological order (newest first)

Languages:

HTML

CSS

JavaScript

XML

SQL

PHP

Frameworks:

Bootstrap

<https://github.com/twbs/bootstrap/blob/master/LICENSE>

<https://getbootstrap.com/docs/4.0/about/license/>

Libraries:

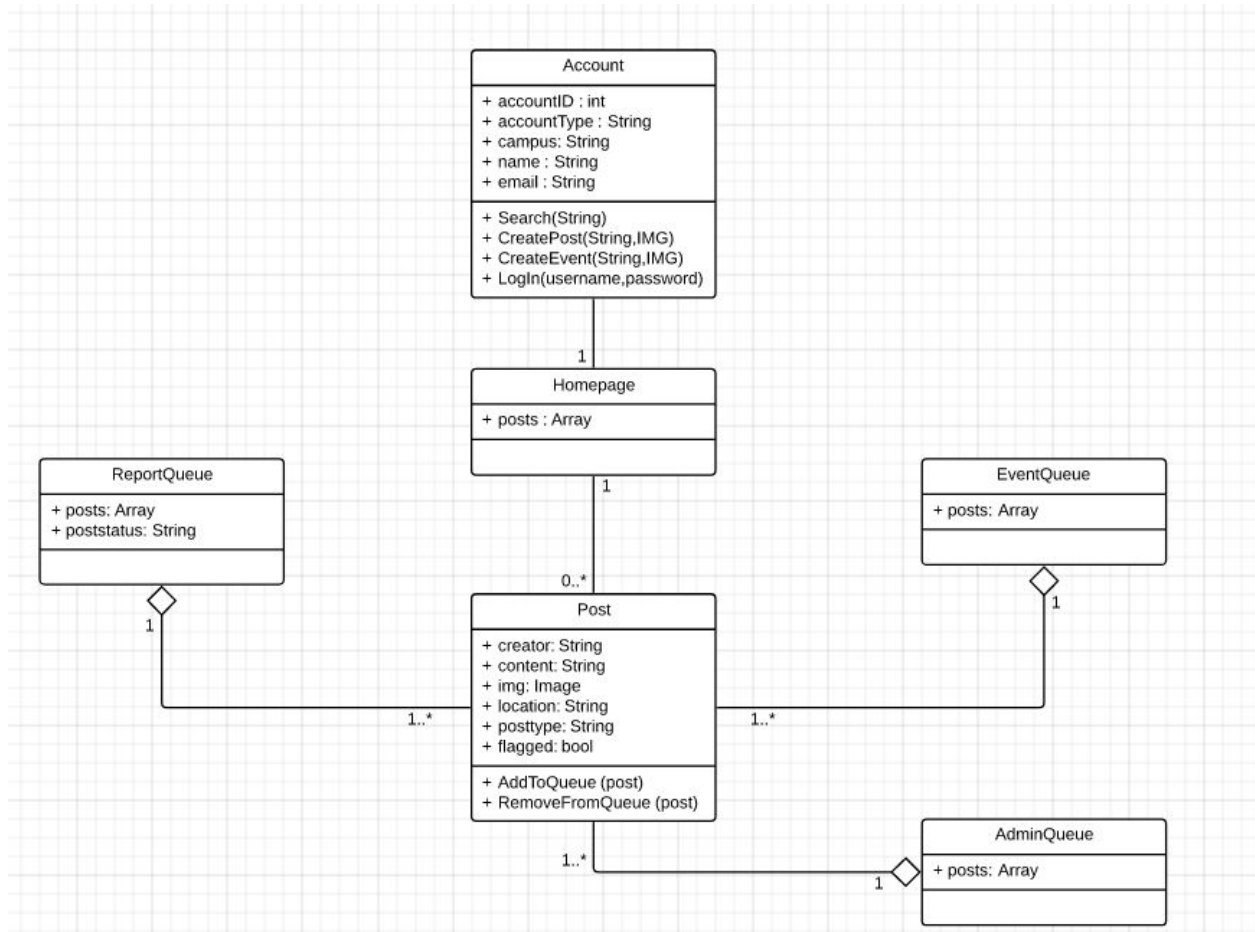
jQuery

<https://github.com/jquery/jquery/blob/master/LICENSE.txt>

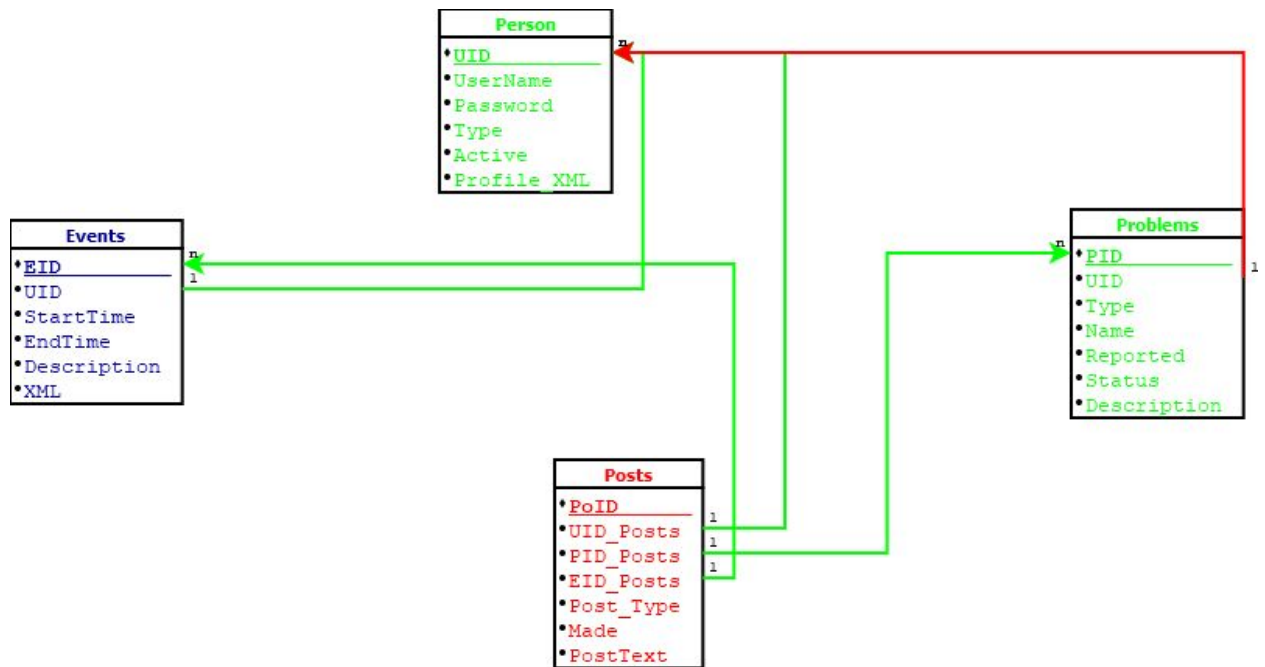
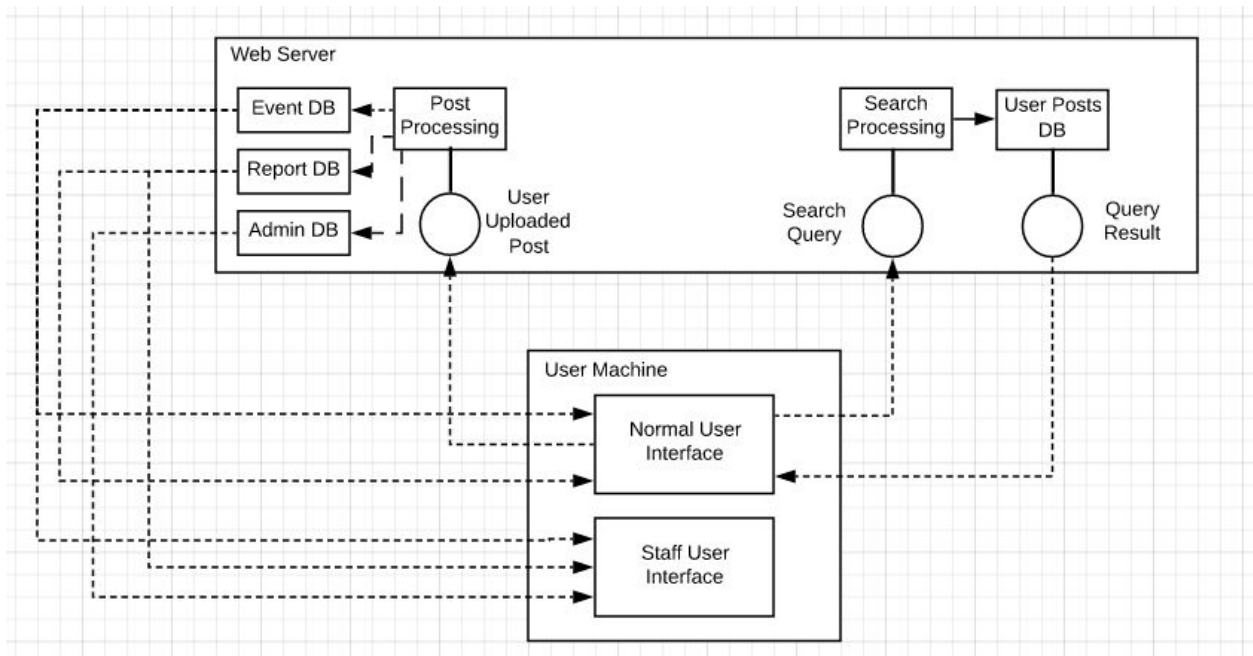
<https://jquery.org/license/>

High-Level UML diagrams

UML Class Diagram



UML Component and deployment diagrams



Risk Identification

Content Risk: Must get permission from users to use the images they upload.

This risk should be quite simple to resolve. When users sign up they must consent to allow the images they upload to the site to be stored by the site and used in the posts they create.

Content Risk: Users might post inappropriate or harmful content.

Without requiring every individual post to be approved by a Staff User the best way to mitigate this is to allow users to report posted content. Staff Users can then review the reported content and take action accordingly such as simple deletion or reporting the users actions to a relevant authority.

Schedule Risk: Hours of Availability

At least one teammate works with a third of us having at least one other coding class to work with. Time management and Assessment will play a factor in the ongoing success of this project.

Team

Joseph Burton - Back-end Developer, Product Owner

Corey Jones - Back-end Developer, Back-end Team Lead, Scrum Master

Dominic Morocco - Front-end Developer, Front-end Team Lead

Bryan Way - Front-end Developer

Peer Review

Team Member	Points
Joseph Burton	30/25
Corey Jones	25/25
Dominic Morocco	20/25
Bryan Way	25/25
Total	100