**CEN4010 Principles of Software Engineering**

**Fall 2019**

**Milestone 1 Project Proposal and High-Level Description**

**Campus Snapshot**

By G10 Software (Group 10)

Proposed on September 23, 2019

**Revision Table:**

|  |  |
| --- | --- |
| **Date** | **Revision** |
| **10/2/19** | **Non-Functional Requirements have been further detailed.** |
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|  |  |

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**Executive Summary**

Campus Snapshot is an online platform that provides users the ability to report, comment on, and view campus incidents. The platform is a modernized approach to a ticket-based system, incorporating a social aspect to the ticket paradigm.

The advent of social-based platforms have greatly improved public safety by increasing public awareness. By incorporating a social aspect to legacy ticket paradigms, we aim to increase campus participants’ awareness of campus incidents. This increased awareness will allow all participants of the campus to interact in a more efficient, transparent way.

This idea of a public forum for campus activities could be extended beyond safety applications. Having an efficient method of communication across a student population allows for information to spread across campus quickly and increase student organization activity across campus.

**Competitive Analysis**

**Campus Snapshot                                            Legacy Ticket Systems**

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| --- | --- |
| Browse (both active and inactive) incidents reported by others | The ability to browse incidents submitted by others is not allowed. |
| Comment on (both active and inactive) incidents reported by others | The ability to comment on incidents submitted by others is not allowed. |

Campus Snapshot competes with legacy ticket systems (such as *Zendesk*) by modernizing the classic ticket-based approach. By using Campus Snapshot (and our paradigm) information is shared with the public, rather than just the organization’s administration--promoting efficiency and transparency. With Campus Snapshots, when someone submits an incident, the information is available to the entire userbase.

A similar ticket system is one used by Comcast to track service outages. Comcast customers can document their internet outages, and view a map which highlights areas in which other users are reporting service outages. The result is a service which allows for Comcast to quickly locate and repair service outages in affected areas. Similar systems are used by other internet service providers, and power companies as well to track power outages.

**Data Definition**

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| --- | --- |
| Registered User | Privileges: Can browse, comment, create new posts  Elements: Username, Password, UID (PK) |
| Admin | Has all regular User permissions, can mark posts active/inactive and delete posts.  Elements: Username, Password, UID (PK) |
| Guest | Privileges: Can only browse posts. |
| Comment | A string of roughly 200 characters. Users can comment on both active, and inactive incidents.  Elements: UID (Foreign Key), PID(Foreign Key), CID(PK), commentText |
| Post | A user-created section (card) containing a picture, description, comments, and an active/inactive indicator.  Elements: UID(Foreign Key), PID (PK), Picture, postText, commentList |
| Picture | An image that is uploaded to a post (as it relates to a particular incident) |
| Incident Feed | A centralized, scrollable feed which displays all posts made to the website in chronological order, most recent at the top.  Elements: A List of Posts |

**Project Overview:**

Campus Snapshot is meant to be used by both campus officials and the public. The application will be designed such that a scrollable feed of incidents can be viewed by users. These incidents are marked active by default. Posts may have comments and likes associated with them which are made by any user. An option to sort the posts between most liked and most recent is also available.

**Scenarios and Use Cases:**

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| Case 1 | Add a Post |
| Actor | University Student |
| Flow | A student walking around campus sees a broken water fountain. They take a picture of the water fountain. They then go to the Campus Snapshot website, and click on the log in link to go to a separate login page. After entering their credentials (correctly) they are redirected to the index page. Here they see a feed and also a prompt to start a new post. They upload the photo via a form and can also add a text description of the incident. Once the student clicks Post, the data is then added to the website’s feed. |

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| Case 2 | Comment on a Post |
| Actor | Generic User |
| Flow | The user wants to comment on a post on the website’s main feed. If the user is not already signed in, they click on the log in link to go to a separate login page. After correctly entering their credentials, they are redirected to the index page. Once on the index page, the user can scroll to the post they want to comment, and under the post there will be a comment section. This section displays each comment made by Users on the post, in chronological order of posting. At the bottom of the comment section is a text box form where the user types their comment and submits it. The comment is then added to the comment section of the post. |

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| Case 3 | Mark A Post Inactive |
| Actor | University Employee |
| Flow | Once a posted incident has been addressed, a representative of the school must sign in to an account which has Admin privileges. The Admin can then scroll down to the specific post as required, and click a ‘Mark Inactive’ button which will set the Post’s state to Inactive, expressing that the incident has been resolved. |

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| Case 4 | Mark A Post as Spam/Inappropriate |
| Actor | University Employee |
| Flow | An Admin user logs in to the website and sees that a user has reported a post as spam/inappropriate. The Admin scrolls to the post and analyzes if it concerns the rules of how a post must be formatted. Once the Admin has decided that a post contains spam/inappropriate content. They will delete it. |

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| Case 5 | Viewing Posts and Comments |
| Actor | Generic User |
| Flow | The user logs in to their account and scrolls through the feed to read posts. The user wanted to view the post popular posts, so they scroll to the top and click on the ‘Most Likes’ option to sort their feed. While looking at the popular posts on their feed, the user also sees the top three comments from each post which are at the bottom of every post. The student now wanted to have their feed be organized by the most recent posts. They scroll up to the top and click on the ‘Most Recent’, which displays the post by the most recent date. The user wanted to view more than the top comments of the post, so they click on it to take them to a page that displays the full post and all the comments on it. |

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| Case 6 | Deleting a Comment |
| Actor | Generic User |
| Flow | The user scrolls through their feed and sees a post they found interesting, they click on it and read the rest of the post. They wanted to make a comment about the post they just read so they scroll down and add the comment. They realized later that their comment had a typo in it. They clicked on the comment and chose the ‘Delete’ option, then added the comment once again without the typo. |

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| Case 7 | Deleting a Post |
| Actor | University Employee |
| Flow | An administrator logs in to their account and scrolls through their They see a post with an inappropriate display picture and decided the post was not safe for work. They clicked on the post and chose the ‘Delete’ option which deleted the post. |

**Functional Requirements:**

1. The system should display the login and sign up option as well as the post feed on the homepage.
2. A user should be allowed to post, comment, like (posts and comments), report and share entries.
3. Administrators should constantly maintain the platform, i.e marking any spam or inappropriate posts.
4. Administrators should constantly check for any listings that have been resolved and can be set for “Mark Inactive.”
5. The system should not allow a user to go over the 200 word limit.
6. The system should not allow a user to post/comment unless they have signed into their account.
7. The system should not allow two users to have the same username.
8. If a user has inputted their credentials incorrectly, the system should prompt a message asking them to try again. The system should also give them a “Forgot Password” option, where a code would be sent to their email, enabling them to access their account.
9. A user should have a “Report” option for any posts they see that are considered spam or inappropriate
10. On the feed, the system should display the title, date, a picture relating to the article, the number of likes, and the top 3 comments for every post
11. The system should give the user an option to sort their feed between “Most Likes” and “Most Recent”
12. The system should not allow any generic user to have administrator rights, these are only offered to university employees who are administrators/moderators of the website.
13. When a user selects the ‘Most Likes’ option, the feed should be arranged from the most liked to the least liked posts
14. When a user selects the ‘Most Recent’ option, the feed should be arranged from the most recent to the oldest dated post.

**Priority:**

1 - Must Have

* 1. The system should display the login and sign up option as well as the post feed on the homepage.
* 2. A user should be allowed to post, comment, like (posts and comments), report and share entries.
* 3. Administrators should constantly maintain the platform, i.e marking/deleting any spam or inappropriate posts and comments.
* 5. The system should not allow a user to go over the 200 word limit.
* 6. The system should not allow a user to post/comment unless they have signed into their account.
* 7. The system should not allow two users to have the same username.
* 8. If a user has inputted their credentials incorrectly, the system should prompt a message asking them to try again. The system should also give them a “Forgot Password” option, where a code would be sent to their email, enabling them to access their account.
* 10. On the feed, the system should display the title, date, a picture relating to the article, the number of likes, and the top 3 comments for every post
* 12. The system should not allow any generic user to have administrator rights, these are only offered to university employees who are administrators/moderators of the website.

2 - Desired

* 4. Administrators should constantly check for any listings that have been resolved and can be set for “Mark Inactive.”
* 9. A user should have a “Report” option for any posts they see that are considered spam or inappropriate

3 - Opportunistic

* 11. The system should give the user an option to sort their feed between “Most Likes” and “Most Recent”
* 13. When a user selects the ‘Most Likes’ option, the feed should be arranged from the most liked to the least liked posts
* 14. When a user selects the ‘Most Recent’ option, the feed should be arranged from the most recent to the oldest dated post.

**Non-Functional Requirements**

1. Performance – A user should be able to access any page on the website within 15-seconds, and should be able to post an incident (including an image upload) within 25 seconds.
2. Usability – A user should be able to gain an intuitive understanding of how to use the website within a minute of interacting with the site.
3. Accessibility – The website should be accessible to anyone who requests it.
4. Expected Load - The website (platform) should be able to serve at least five-hundred active users concurrently.
5. Security Requirements – The website will be secured from front-end (e.g. scripting attacks) and back-end (e.g. SQL-injection) concerns.
6. Storage – A post will contain no more than five-hundred characters, and a maximum image size of 3Mb.
7. Availability – The website shall be available 24/7.

**System Architecture**

1. Main Software Products:
2. GitHub
3. Google Drive
4. Trello
5. Tools:
6. TBD
7. Languages:
8. HTML
9. CSS
10. JAVASCRIPT
11. List of Core APIs:
12. TBD
13. Supported Browsers:
14. Google Chrome
15. Mozilla Firefox
16. Safari
17. Framework:
18. Laravel

**Key Risks**

Any risks posed below will be addressed upon further development of our platform.

1. **Skills risks** (do you have the right skills)
   * Each team member has the right skills needed to complete this project.
2. **Schedule risks** (can you make it given what you committed and the resources)
   * As of right now we have no schedule risks as everything is to schedule and on time.
3. **Technical risks** (any technical unknowns to solve)
   * Browser Compatibility
     + Will our page load across different browsers, such as chrome, safari, and Firefox? Can all elements of our page be accessed, even if the page loads and is viewable?
   * Page Loading
     + Does our page load at a reasonable rate?
4. **Teamwork risks** (any issues related to teamwork)
   * There are no teamwork related risks, currently.
5. **Legal/content risks** (can you obtain content/SW you need legally with proper licensing, copyright)
   * Yes, we can obtain the proper licensing and copyright for our product

**Team**

**Group name:** G10

**Members (with Roles):**

* Joshua Cidoni-Walker (Product Owner)
* George Porte (Scrum Master)
* Bea Montilla (Developer)
* Tashika Williams (Developer)

**Checklist**

1. Team decided on basic means of communications **(Done)**
2. Team found a time slot to meet outside of class (**On Track**)
3. Front and back end team leads chosen **(Done)**
4. Github master chosen **(Done)**
5. Team ready and able to use the chosen back and front-end frameworks **(Done)**
6. Skills of each team member defined and known to all **(Done)**
7. Team lead ensured that all team members read the final M1 and agree/understand it before submission **(Done)**