CEN 4010 Principles of Software Engineering Spring 2021

Milestone 1: Team Project Proposal and Description

Group 11: COVID-19 Forum

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Version History:

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**Executive Summary**

The COVID-19 Forum is a software project in development by CEN4010 Group 11.

The goal of the COVID-19 Forum is to connect users through shared experiences and feelings that have been caused by the Corona virus pandemic. This global catastrophe has drastically changed the lives of everyone.  Group 11 hopes that the COVID-19 Forum will allow for people to connect and share information about the ongoing epidemic; whether it be scientific data or emotional support resources, the forum will be a place to bring a sense of normalcy upon us all during such an abnormal time.

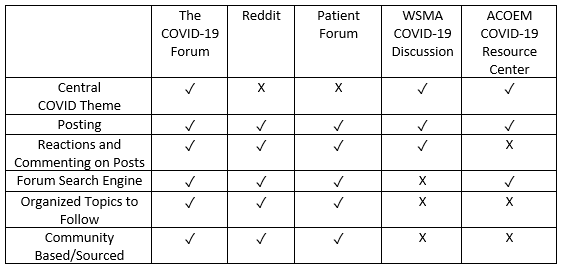
The COVID-19 Forum will be accessible via web browser and will allow users to view posts created by others. Users can create accounts to engage with the forum. Features such as creating, liking, and commenting on posts will be made available to enable engagement amongst the visitors. The forum will be organized by topics such as “news” and “emotional support”. Those with an account can choose to “follow” topics of their choice in order to tailor their feed to their liking. Additionally, the COVID-19 Forum will be optimized for viewing on mobile devices, ensuring that anyone can access the information with ease no matter where they are.

Those who choose to not create an account will still be able to utilize the site, with some limitations on the features they can interact with. Things like creating, commenting on, or liking posts will only be available to those with an account; as well as the ability to follow topics. To experience everything that the COVID-19 Forum has to offer, Group 11 recommends creating a login. However, posts can still be viewed by those just visiting; we believe such valuable information should be available to everyone.

To create a profile, users will input information such as their name, email address, and password. Group 11 is dedicated to protecting the information of all users and will put in place security measures to ensure that data is encrypted and secure.

Group 11 understands that connecting during these times of social distancing can feel impossible. We hope that the COVID-19 forum will bring people together by offering a supportive community that encourages educational and positive discussion regarding an objectively negative situation.

**Competitive analysis**

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Our COVID-19 Forum will have a search engine that easily filters through posts via keywords on our site. From there we will have options to keep up to date with the topics that you desire; users will be able to customize their feed by choosing topics to follow. When posting to our site, you can tag your contribution to easily be found by other users that are interested in what you are sharing. From here you can comment on other posts and/or give reactions, similar to a thumbs up.

Unlike our competitors, the COVID-19 forum will combine both social media practices and resource forum formatting into one community-based site. The WSMA and ACOEM discussion boards are not accessible to the general public and focus primarily on information sharing between physicians and medical practitioners. Group 11’s COVID-19 Forum will keep information easily accessible to any and all visitors.

**Data definition**

Data Dictionary

|  |  |  |
| --- | --- | --- |
| **User Account** | | |
| **Attribute** | **Description** | **Type** |
| username | A user’s display name on the website | Text |
| password | A user's hashed password to log in to the website | Text |
| first\_name | A user's first name that is displayed when visitors view account details of a member | Text |
| email | A user's email that can be used for account creation and log in | Text |
| picture | Account’s profile picture | Image |
| total\_post | Number of posts created by a user | Integer |
| thread\_count | Number of threads a user is following | Integer |
| followed\_threads | Shows a user’s followed threads (topics) | Text |
| status | Indicates if a user has the status of administrator | Boolean |
| **Threads** | | |
| recently\_updated | The date for the most recent post made on a thread | Timestamp |
| subject | The subject (title) of a thread | Text |
| followers | The total number of accounts that follow a thread | Integer |
| **Posts** | | |
| created | The date for when a post was first created | Timestamp |
| content | An area for a user to type what they want to post for a thread | Text |
| likes | The number of positive reactions on a post | Integer |
| dislikes | The number of negative reactions on a post | Integer |
| tags | Central topic(s) of post  (i.e. emotional support, news, etc.) | Text |

**Overview, scenarios and use cases**

This section describes the project overview (in much more details) and likelihood usage scenarios of your product from end users’ perspectives. Focus only on main use cases.  Simple text format is OK and preferable – tell us a story about who and how is the application used. Focus on WHAT users do, their skill level, not on HOW the system is implemented. You can expand use cases provided in high level documents in future milestones.

**Initial list of high-level functional requirements**

1. Account Creation: Users will be able to create an account using an email address secured with a password. Those with an account will be able to engage with other features such as commenting on, creating, and liking posts. All accounts will have a designated profile page.
2. Post Creation: Users will be able to create posts that contribute to a defined set of threads. Users will be prompted to input a title and a body of text. Feature only available for members.
3. Post Interactions: Users can interact with posts created by others users by reacting with a “like” or a “dislike”. Users can also comment on other posts. Feature only available for members.
4. Topic Following: Users can customize the content that they see by “following” any desired topics. Feature only available for members.
5. Content Searching: Visitors will be able to search through forum posts using keywords. Any posts tagged with a keyword will have priority over posts that simply contain the search term; i.e. tagged posts will be shown before any other relevant discussions.
6. Profile Viewing: Allows visitors to view the profiles of other users. Profiles should show basic information about the user such as their username and any posts they have created.
7. Topic Organization: Describes what a topic thread looks like. Posts are shown in chronological order starting with most recent.

**List of non-functional requirements**

For example, performance, usability, accessibility, expected load, security requirements, storage, availability, fault tolerance etc.  Number each. When possible, try to quantify these quality attributes.

1. Password Hashing: Ensures data security for users.
2. Security: Captcha verification for login.
3. Portability: Website will be optimized for mobile device viewing as well as for use on a personal computer.
4. Expected Load: Limit the number of requests made by a single user, more specifically users can make up to 500 requests per minute.
5. Usability: Information is accessible to any site visitors. However, features such as commenting on, liking, and creating posts are limited to only those who possess an account.
6. Storage: Data retained will be restricted by the capabilities of the FAU phpMyAdmin tool. Any images exceeding 5MB will be compressed to optimize storage. Additionally, the body of a post will have a character limit of 5,000.

**High-level system architecture**

Software/Tools:

* phpMyAdmin (MySQL) - administration tool for MySQL
* npm - package management system
* Brackets - Code editor

Languages:

* PHP
* SQL
* HTML
* CSS
* Javascript

Frameworks:

* Chart.js - dynamically create charts within JavaScript
* Bootstrap - responsive CSS framework

APIs:

* COVID-19 Data API (<https://covidtracking.com/data/api>)

**Team**

List student group names, name of Scrum master, product owner and initial roles for each member

**Checklist**

For each item below you must answer with only one of the following: DONE, ON TRACK (meaning it will be done on time, and no issues perceived) or ISSUE (you have some problems, and then define what is the problem with 1-3 lines). Reflect these items in your Jira project space:

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