

# CEN 4010 Principles of Software Engineering Spring 2021

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## Milestone 1: Team Project Proposal and Description Group 11: COVID-19 Forum

Zachary Goldstein, Alena Krause, Carlos Salazar,  
Shannon Soulard, Brandon Que

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### Version History:

1.01	Document Template	11 February 2021
1.02	Initial Draft	15 February 2021
1.03	Final Draft	16 February 2021

## 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

	The COVID-19 Forum	Reddit	Patient Forum	WSMA COVID-19 Discussion	ACOEM COVID-19 Resource Center
Central COVID Theme	✓	X	X	✓	✓
Posting	✓	✓	✓	✓	✓
Reactions and Commenting on Posts	✓	✓	✓	✓	X
Forum Search Engine	✓	✓	✓	X	✓
Organized Topics to Follow	✓	✓	✓	X	X
Community Based/Sourced	✓	✓	✓	X	X

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

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

<b>Posts</b>		
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

Accessible to almost anyone, the COVID-19 Forum is a platform created to help us connect during these difficult times. It is a place for users to create, share, and discuss their personal experiences related to COVID. The COVID-19 Forum attracts a specific audience and can easily become the preferred platform to exchange knowledge about the COVID-19 virus.

The COVID-19 Forum will be used to share information such as tips for soothing one's anxiety levels, finding new ways to keep safe, and expanding one's general knowledge about the virus.

There are multiple scenarios in which one can access the COVID-19 Forum. The site administrators have full site privileges in order to make sure that the terms and guidelines are being followed. Site administrators will be able to remove any discussion, thread, and/or reply. Site visitors who do not have an account will be able to view the forum but are limited in terms of engagement. These individuals may not like, create, or comment on posts and additionally will not be able to follow topics to customize their feed. Users with an account will have access to all the aforementioned features and additionally will have their own profile page.

When creating a post, users will be able to choose which thread they would like to contribute to. Users will be prompted to add a post title and body. Additionally, any attempted contributions to information based topics, such as news, will have a dedicated field for placing resources. This ensures that credible and non-credible information are easily distinguishable.

The COVID-19 forum can be an excellent research tool where users can easily kindle new ideas/opinions about the virus. No matter if a user is simply an observer or

someone who participates regularly in discussions, everyone will be allowed to observe the same amount of information.

### **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.
8. Data Display: Visitors will be able to see a thread of relevant COVID-19 data (sourced from the COVID-19 Data API).

### **List of non-functional requirements**

1. Security: Captcha verification for login and password hashing to ensure data security for users.
2. Portability: Website will be optimized for mobile device viewing as well as for use on a personal computer. Additionally, will work on all modern browsers including Firefox, Safari, Chrome, and Edge.
3. Expected Load: Limit the number of requests made by a single user, more specifically users can make up to 500 requests per minute.
4. 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.
5. Storage: Data retained will be restricted by the capabilities of the FAU phpMyAdmin MySQL 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.

6. Accessibility: Site will be easy to use and intuitive. Additionally, will be aesthetically pleasing and organized. Site will not require any specialized training for use.

## High-level system architecture

### Software/Tools:

- phpMyAdmin (MySQL): Administration tool for MySQL, will be used as the primary database for the software.
- npm: package management system
- Brackets/Visual Studio Code: Code editor used for HTML, CSS, JavaScript, etc.
- GitHub: Version control software used for source code management.

### Programming Languages:

- PHP: Programming language will be used for database access.
- SQL: Programming language will be used for database creation and management.
- HTML: Programming language will be used for website appearance and design.
- CSS: Programming language will be used for overall presentation of the website.
- Javascript: Scripting language will be used for programming site functionality.

### Frameworks:

- Chart.js: Used to dynamically create charts within JavaScript.
- Bootstrap - Responsive CSS framework used for website presentation.

### APIs:

- COVID-19 Data API: Used for reporting data on the COVID-19 virus.  
(<https://covidtracking.com/data/api>)

## Team

Team Member	Email	Role
Zachary Goldstein	zgoldstein2018@fau.edu	Product Owner & GitHub Master Back-End Developer
Carlos Salazar	csalazar2018@fau.edu	Scrum Master & Team Leader Back-End Development Lead
Brandon Que	bque2018@fau.edu	Front-End Developer
Shannon Soulard	ssoulard2018@fau.edu	Front-End Development Lead
Alena Krause	akrause2017@fau.edu	Front-End Developer Back-End Developer

## 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:

- a) Team decided on basic means of communications **DONE**
- b) Team found a time slot to meet outside of the class **DONE**
- c) Front and back end team leads chosen **DONE**
- d) GitHub master chosen **DONE**
- e) Team ready and able to use the chosen back and front-end frameworks **DONE**
- f) Skills of each team member defined and known to all **DONE**
- g) Team lead ensured that all team members read the final M1 and agree/understand it before submission **DONE**

## Reviewed

Alena Krause	16 February 2021
Carlos Salazar	16 February 2021
Shannon Soulard	16 February 2021
Zachary Goldstein	16 February 2021
Brandon Que	16 February 2021