# SW Engineering CSC 648/848 Section 02

## www.ASOPF.com

A Song of Plague & Fire - WWW Site for Public Safety (COVID & Wildfier) for California Team 05

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DEMO URL: 3.134.206.193/

Milestone 5

11/27/2020

## **Product Summary**

**Product Name**: A Song of Plague & Fire (ASOPF)

#### **Product Functionalities:**

- 1. The website shall allow users to register and log in to their accounts
- 2. The website shall display statistics on COVID & wildfire for each county in California
- 3. The website shall permit administrative privileges to California health & safety officers
- 4. The website shall allow registered users to subscribe for alerts of when new data is up
- 5. The website shall display data in both verbose and graphical manners
- 6. The website shall have system security to keep it safe from hackers & malicious attacks
- 7. Admin users shall be able to upload data points to the website
- 8. Users shall be able to upload files to permitted locations (ie: avatar)
- 9. Users shall be able to customize a dashboard of statistics to monitor

#### **Brief Description:**

ASOPF is designed to be a one-stop-shop for all COVID & wildfire safety data. Users should have pertinent information presented in a way that is very quick and easy to read for their home county and can look to the rest of the state.

#### **Unique Qualities:**

Dynamic & mobile-friendly webpage that is less dense & verbose than the government sites. We limit data fields to be only the pertinent ones and structure the website in such a way that it is pleasant to look at (compared to the more dense government sites) and the key feature of the site is a customizable dashboard that the user can save their own data points to be seen and arrange the displays of data in a way that is pleasant to them.

## Feedback Summary Report

#### Milestone 2

#### Milestone 2 Feedback

Team 5 "www.ASOPF.com - A Song of Plague & Fire"

#### **CEO/CTO Feedback**

Thank you ASOPF team, good progress. I enjoyed the mockups and storyboards. They represent what our customers are asking for. Please focus on the implementation now, according with the specifications and timeline. Regarding the prioritization, this exercise it is very important, but not sure if the way you are representing that is very clear. Keep it up and make the adjustment according with the feedback, below.

#### Instructor Feedback

Overall Objective of Milestone 2 [Need improvement, On track, Above Expectations]: **On Track needs some improvements.** 

#### Specific Feedback:

ID	Item	Criteria	Feedback
00	Expected size	About 20-25 pages	19 pages
	of this		
	document		
01	Functional	Expand or repeat	On Track. Need improvement. I recorded 17
	Requirement	functional requirements	functional requirements from M1. And I see that
	s - prioritized	from Milestone 1 into	the prioritization in M2 has a different format and I
		Milestone 2 w/ reference	don't see numbers to identify the functional
		numbers (1-must have; 2	requirements, just description. This format will be
		– desired; 3 –	difficult to track with just bullet points and not
		opportunistic)	numbers. It would be good to identify them with
			numbers as 1., 1.1. and so.
02	UI Mockups	All major use cases from	On Track. Great mockups and storyboards. For the
	and	M1. Format is very	use cases, besides numbering them, it would be
	Storyboards	flexible, recommend hand	good to add a title as well.
	(high level	drawings	
	only)		
03	High level	Make sure the titles and	On Track. I didn't see any API integration.
	Architecture,	var. names are in easy to	
	Database	understand plain English	
	Organization	and consistent with data	
		definitions. <i>Media</i>	
		storage, APIs (if any),	
		algorithm and SW tools	

04	High Level	HL Class diagrams, and	On Track. Good.
	UML	Component and	
	Diagrams	deployment	
05	Key risks for	Skills, schedule, technical,	On Track. Skills Ö Schedule Ö Technical Ö
	your project	teamwork, legal/content	Teamwork <b>Ö</b>
	at this time		
06	Project	No more than half a page	On Track. Ok.
	management	how you managed and	
		plan to M2 and <u>future</u>	
		tasks. <u>Must</u> start using	
		Trello or similar tools for	
		task management	

**Next Steps:** Review this feedback with your team, incorporate any to your document and freeze it. We will go over the vertical prototype during class on Tuesday. Also, we will be introducing M3, which you need to focus for the next week.

~Prof. Villar

#### Milestone 3

T5 Feedback

#### **CEO/CTO M3 Feedback**

Thank you ASOPF team for the progress in your application. Make sure that the users have a nice flow in your web app. For some reason it seems that the first search/home page needs to be simpler by integrating both options instead of two big pictures for Wildfire vs. Covid. You have good functionalities working already, make sure to finalize the rest. The product release date is coming soon.

#### Instructor M3 Feedback

Overall Objective of Milestone 3 [Need improvement, On track, Above Expectations]: **On Track, need some improvement.** 

#### Specific M3 Feedback:

ID	Item	Criteria	Feedback
01	UI and functionality feedback (P1 functions only)	- Test main use cases - Check functionality and record issues/observe bugs - Check UI and usability - Check if UI is responsive to change of browser size - Performance in page/image rendering, search	Need Improvement, there are still several details in this application that need to be integrated and functionalities full working.

		- Verify enough WWW pages are implemented and connected	
02	Functionality Check	<ul> <li>Home page</li> <li>Search (including search field validation)</li> <li>Search results</li> <li>Filtering (dropdown menu search)</li> <li>Search Details and maps (if applicable)</li> <li>Alert  Messaging/Registration/Administration (if applicable)</li> <li>Data Upload/Metrics Entry</li> <li>Dashboards (user/admin)</li> <li>UI responsiveness (resize the browser)</li> <li>Performance (e.g. display of results list)</li> </ul>	On Track, need more implementations.  Home page is good. Search functionality is working, results are displayed in a not very intuitive form (data table by row w/diff dates) Registration capability is done, need some improvement s. No Map visualization is integrated Metrics entry and alert messaging pending to be built.

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03	Brief review of code, github, database etc.	<ul> <li>All key DB tables completed (users, items, messages, categories etc.)</li> <li>Search fully working</li> <li>Home page and search results integrated with back end</li> <li>Search field input validation to allow proper alphanumeric characters (letters and numbers)</li> <li>Search arguments persistent</li> <li>Be ready to show examples of code so coding style and code comments can be checked.</li> </ul>	On Track, need more integration.  DB needs to be finalized (more tables to be added) Search validation not implemented Code comments need to be added
04	Project status	<ol> <li>Teamwork:</li> <li>Risks</li> <li>Coding practices</li> <li>Usage of proper SE code management practices</li> <li>How did you address site security and safe coding practices</li> <li>Digital content</li> <li>Other</li> </ol>	On Track. Maximize collaboration for fully integration. Make sure to address site security.
05	List of P1 features committed for delivery agreed	Team already reviewed and committed for final P1 list?	On Track. Make sure to implement all your functions from your P1 list

06	Overall Instructor Review	<ul> <li>Git/Github organization</li> <li>Git/Github usage</li> <li>Code documented</li> <li>MVC/OO patterns followed up</li> <li>Frameworks</li> <li>Database organization</li> <li>Blobs being used?</li> <li>Adherence to best practices of security</li> <li>Efficiency</li> <li>Other</li> </ul>	On Track. Make sure that the code and database are proper submitted in github.
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**Next Steps for M3:** Review this feedback with your team. Your application is getting there but some implementations are still pending. Keep working on it, implement all the pending functions (P1). Move quickly to M4 and be ready for M5 final product with all functionality working.

~Prof. Villar

#### Milestone 4

CSC648/848 M4 T5 Feedback

#### **CEO/CTO M4 Feedback**

(ASOPF) A Song of Plague & Fire Team, your documentation is missing a good code peer review and the original non-functional specifications. It seems to be a 'place holder' incomplete document. From previous milestones and checkpoints, we know you are a little behind with the application. Please focus in finalizing your web app and adding all the needed functionality.

#### **Instructor M4 Feedback**

Overall Objective of Milestone 4 [Need improvement, On track, Above Expectations]: **On Track** - Need improvement

#### Specific M4 Feedback:

ID	Item	Criteria	Feedback

01	Objectives Achieved?			Incomplete document.
		1.	To make final	
			commitment for	
			functions to be	
			delivered	
		2.	To check that all	
			required	
			non-functional	
			specs are satisfied	
			or on track	
		3.	To practice formal	
			usability test plan	
			development	
		4.	To practice formal	
			QA	
		5.	To practice code	
			review	
		6.	Ensure basic	
			practices of secure	
			SE are applied	
		7.	Ensure effective	
			teamwork	
		8.	Ensure software	
			development is	
			effective	

#### 02 Document delivered (PDF) On Track. 1. Product summary • Ok Summary. 9 $(^{2}/2 p)$ itemized list. I don't 2. Usability test plan see unique qualities, (~2 p) 3. QA test plan (~2 p) nor a brief description. 4. Code Review (~2 p) • Ok UT and QA plan. 5. Self-check on best • Code peer Review practices for missing. security (~1/2 p) Standard Security 6. Self-check: approach. Adherence to • The Non-functional original Specifications list is Non-functional missing the original specs list. They were giving at the beginning of the class and the teams should track completion, on-track or issues. The ones presented can be added but the original needed to be

**Next Steps:** Review this feedback with your team, and freeze it. Finalize all the functionality and integration, <u>Be ready for M5</u>.

included.

~Prof. Villar

## **Product Summary**

#### **Product Info**

NAME: ASOPF (A Song of Plague & Fire)

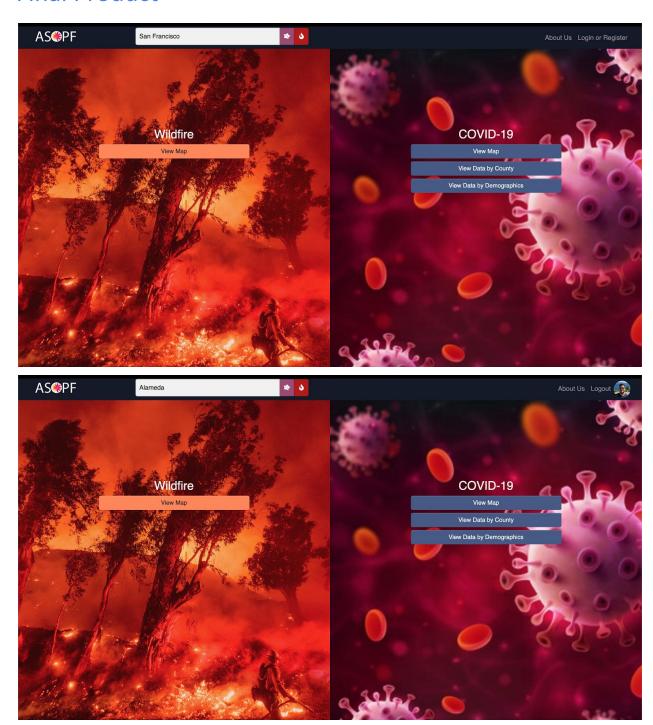
**BRIEF:** ASOPF is designed to be a one-stop-shop for all COVID & wildfire safety data. Users should have pertinent information presented in a way that is very quick and easy to read for their home county and can look to the rest of the state.

**UNIQUE FEATURES:** Dynamic & mobile-friendly webpage that is less dense & verbose than the government sites. We limit data fields to be only the pertinent ones and structure the website in such a way that it is pleasant to look at (compared to the more dense government sites) and the key feature of the site is a customizable dashboard that the user can save their own data points to be seen and arrange the displays of data in a way that is pleasant to them.

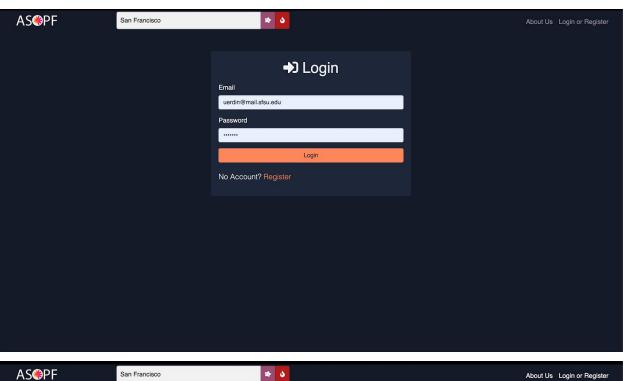
#### **Committed Functions**

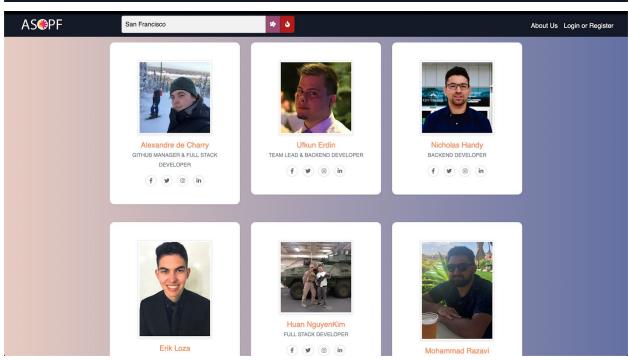
- 1. The website shall allow users to register and log in to their accounts
- 2. The website shall display statistics on COVID for each county in California
- 3. The website shall have a map of current wildfires in California
- 4. The website shall permit administrative privileges to California health & safety officers
- 5. The website shall allow registered users to subscribe for alerts of when new data is up
- 6. The website shall display data in both verbose and graphical manners
- 7. The website shall have system security to keep it safe from hackers & malicious attacks
- 8. Admin users shall be able to upload data points to the website
- 9. Users shall be able to upload files to permitted locations (ie: avatar)
- 10. Users shall have a dashboard view that shows them all of the latest covid data and wildfire map

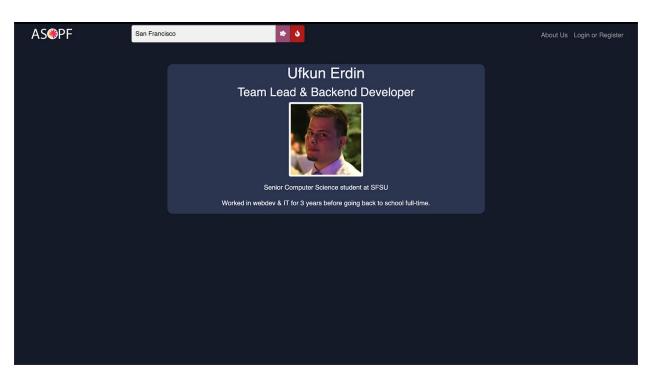
# **Final Product**

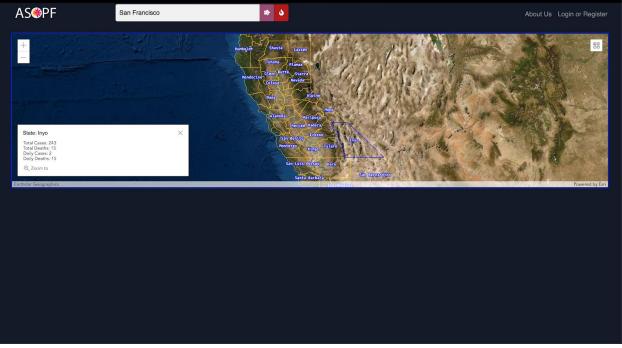


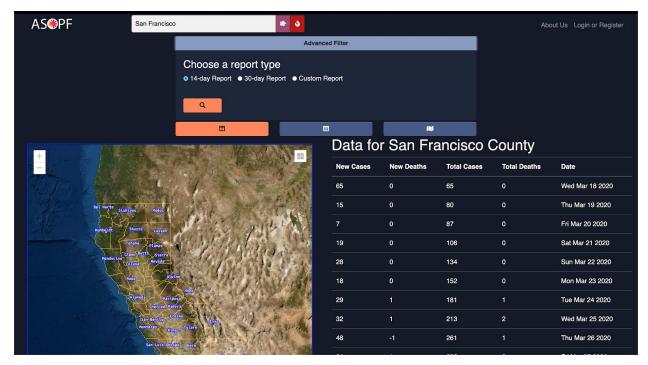
When a user is logged in, the search bar automatically changes to be the registered user's county





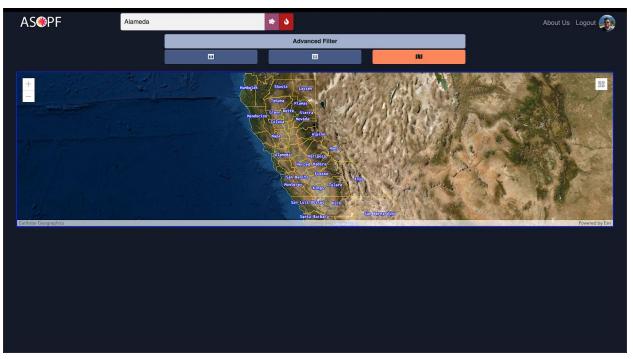


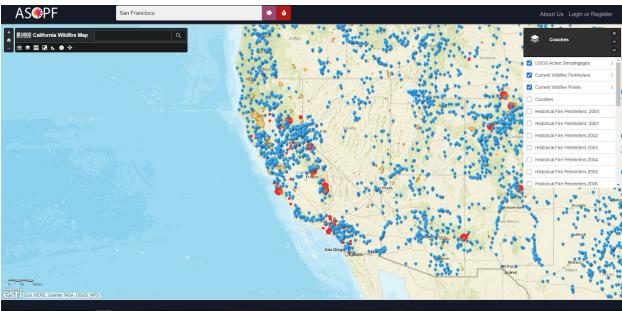




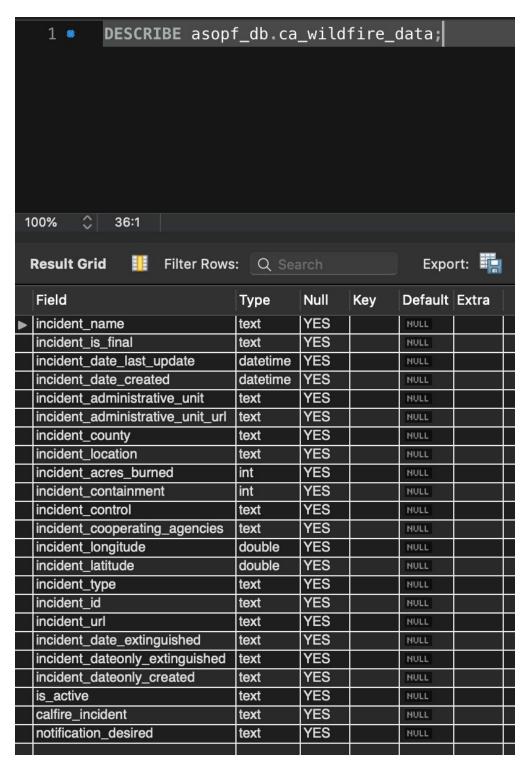
The previous screen with map only just shows covid data by county when hovering on the specific county on the map. In the screen above, the user can see a side-by-side view. On the left is the map, on the right is a data table with the specific report selected by the advanced filter. The user can also change the page to be table only, map only, or both views (below).

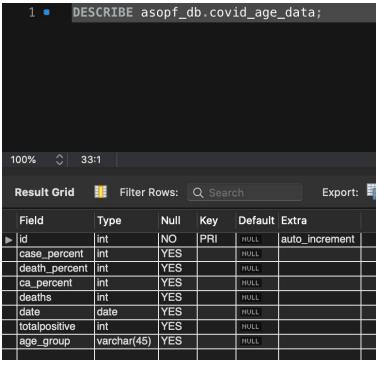
AS <b>%</b> PF	Alameda	野り		About Us Logout					
		Ad	vanced Filter						
			<b>≡</b>						
Data for Alamed	Data for Alameda County								
New Cases	New Deaths	Total Cases	Total Deaths	Date					
29	0	29	0	Wed Mar 18 2020					
7	0	36	0	Thu Mar 19 2020					
6	0	42	0	Fri Mar 20 2020					
20	0	62	0	Sat Mar 21 2020					
10		72		Sun Mar 22 2020					
16	0	88		Mon Mar 23 2020					
8		96	2	Tue Mar 24 2020					
38		134	3	Wed Mar 25 2020					
38		172	4	Thu Mar 26 2020					
13	0	185	4	Fri Mar 27 2020					
20	2	205	6	Sat Mar 28 2020					
2	0	207	6	Sun Mar 29 2020					
43		250	7	Mon Mar 30 2020					

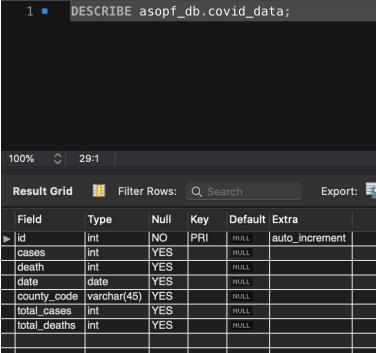


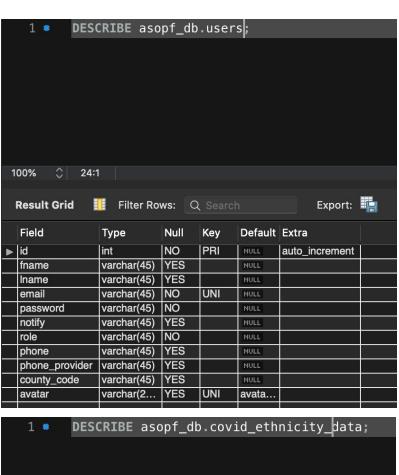


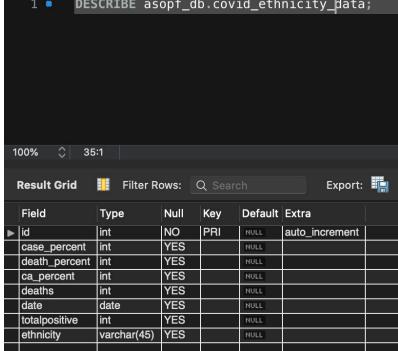
# **Key DB Tables**

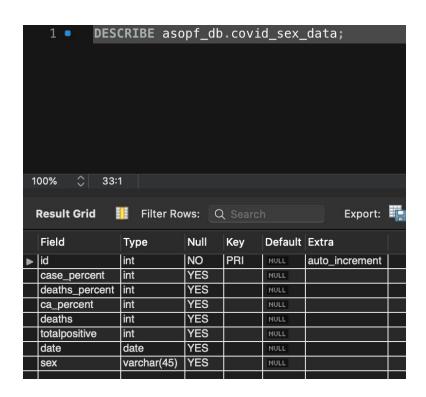




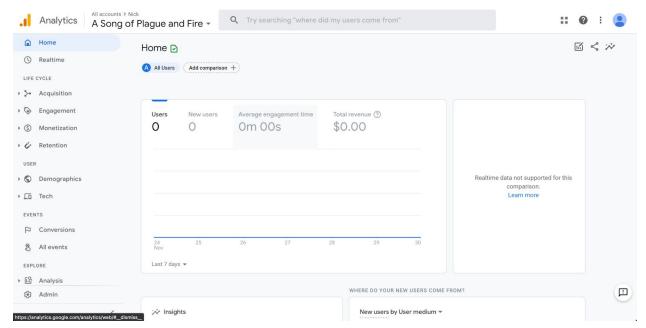






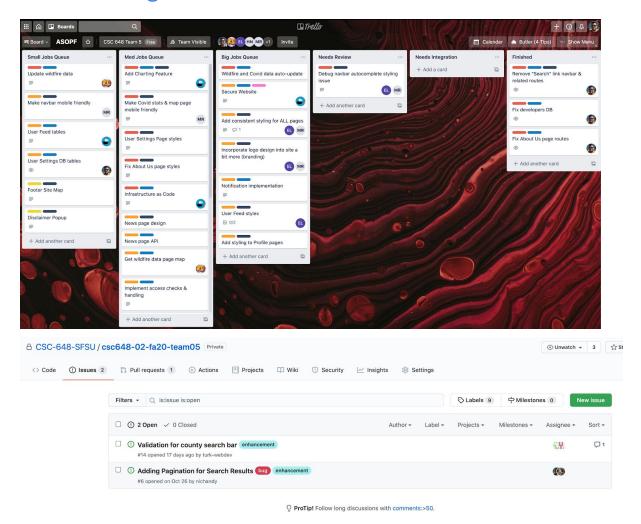


# **Google Analytics Plots**



Our Google Analytics is set up, but we were working mostly from localhost during development and our remote host was down for the most part - so we didn't have any traffic coming to our data.

## **Team Management**

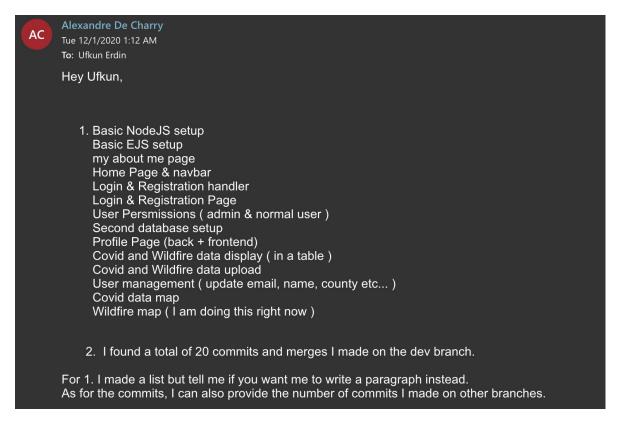


We used a combination of Trello and the issues tab of Git to manage the team. Through Trello, we monitored all of the broad tasks to be done - having them divided by task size and a separate column for when tasks were awaiting integration and approval on Git.

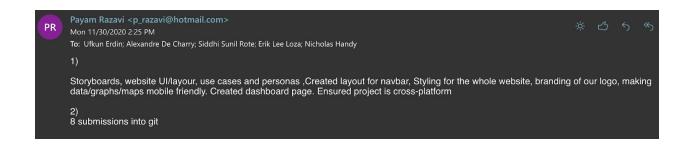
If, in testing, issues were found on commits, then we would create issues reports on Git and attach them to PR's to debug and fix said issues.

### **Team Member Contributions**

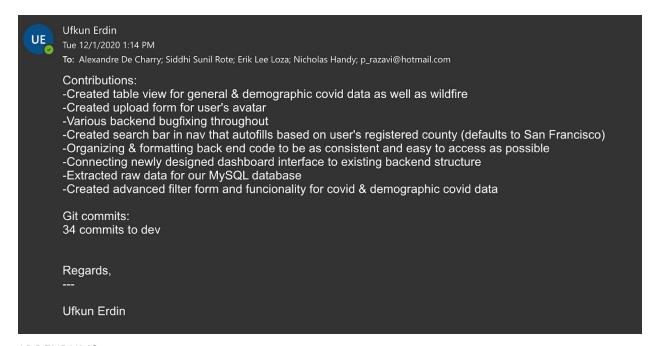
## Alexandre De Charry



#### Mohommad Razavi



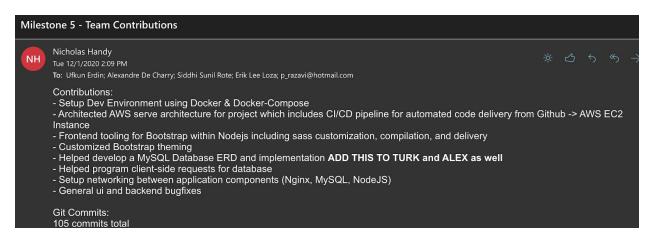
#### **Ufkun Erdin**



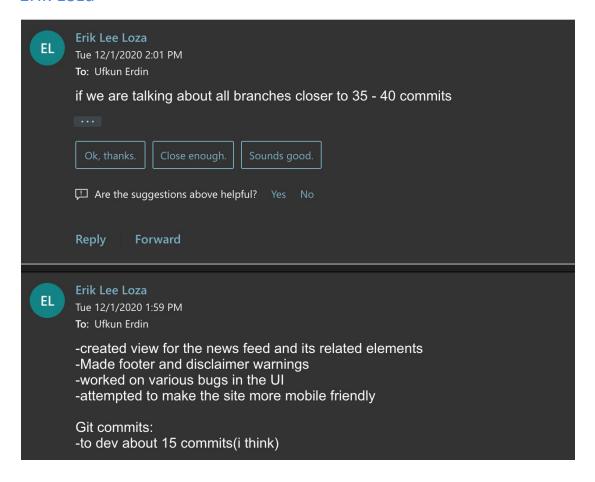
#### ADDENDUMS:

- Apparently my commit count in the original email was wrong Nick looked and saw I had 104 commits to dev between Sep 1 and Dec 1.
- In my capacity as Team Lead I managed the group Discord server we used for communications as well as handling as much of the "paperwork" portions of the Milestone docs (things that did not directly pertain to development) without busying the developers with it.

## **Nicholas Handy**



#### Erik Loza



We did not receive contribution emails from Huan & Siddhi

## **Post Analysis**

This project was a great lesson in two fields: The first and most obvious one being learning the technologies, but the greater lesson was in learning to work together in a group setting. The latter was where some of our greatest failings were and where we grew and learned the most. In fact, some of the failings in the technologies side could even be somewhat attributed to a failure in teamwork.

First and foremost, for quite a few of us the technology stack we used was brand new. Many of us had never worked much with web, and even fewer had much experience (to start) with Node and ExpressJS. Though half of the team made great strides very quickly to pick up and get comfortable with this technology, the other half struggled to get off the ground. This was our first failure in teamwork - when splitting the team to front and back end, we had just met one another and did not yet have a very good idea of who among us were more self-starters and who worked better when first given a heavy lay of the land. This caused even more issues when we started using Docker to help synchronize everyones' workspaces (Node modules and MySQL databases) - as nearly everyone on the team had never worked with this technology and while the self-starters were able to pick it up quickly - the other half of the team was bogged with bugs and strange errors which greatly hindered their development ability. We certainly could have taken much more time around here to break down what Docker is, how it works, and meet regularly to work through everything with the team.

Though resources and helpful links were shared, we were treating everyone in the group to be at the same level of self-starter energy, and this left half the team in the dust unsure of what to do while the rest was over-grabbing tasks to complete. We were able to resolve this much later, but by then we had lost quite a bit of development time. It wasn't until around Thanksgiving break week that we found a different system of management and using standups (daily check ins to go over what was done the day before and what was the plan for that day and state any possible blockers), but by that time we were too close to the end of the deadline to be able to fully utilize everyone's abilities and get everyone synced.

Overall, this project's greatest lesson was not only in learning personal time management skills, but also team management skills. Doing the standups and having a better Trello board system earlier on in the semester could have been very helpful to making sure not so many fell behind and were kept in the loop. Everyone had different levels of comfort with the technology, and (as a team lead) being better about checking in one-on-one with everyone regularly starting from earlier on would have gone a long way in making sure everyone felt comfortable with everything that was happening.