Butler University

EPICS Advisory Board

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Engineering Projects in Community Service

Professor Linos

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Chapter 1

In EPICS, the teams do not always know how to solve every problem thrown at them. The professors and faculty are there to assist and guide them, but even they are not familiar with everything that the teams come across. It is for this reason that we have chosen this project, to give our peers and future EPICS teams a way to access knowledge and resources outside of Butler. Our case is unique because our clients are our professor, as well as the EPICS webmaster. Throughout the development process, we worked very closely with our clients, to ensure the product met their expectations. Ryan Ooley is our Team Leader, Trent Miller is our Head of Implementation, and Tyler Pollard is our Head of Consultant Interaction. From the start, we have worked efficiently as a team.

From here on a Consultant is someone we have reached out to and they agreed to help EPICS teams. A plugin is a grouping of compiled code in Wordpress used to accomplish a specific goal.

The rest of the report will consist of a description of the project requirements, the architecture, design, and implementation of the application, quality assurance testing, organization of the team, and plans for the future.

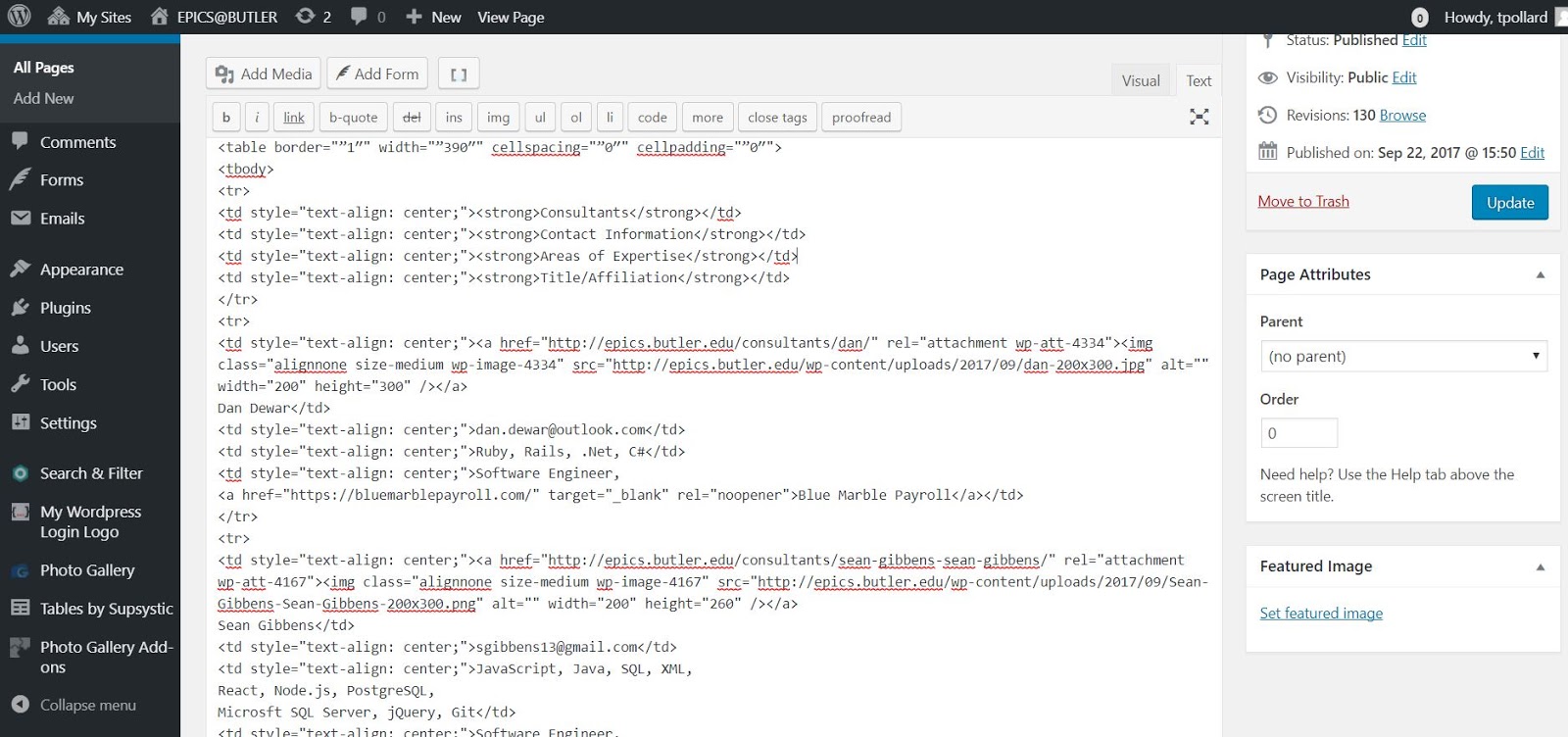
Chapter 2

Our first requirement from our clients was to create a list of professionals and alumni to serve as consultants to EPICS teams currently and in the future. We had to reach out to alumni, faculty, and other professionals to invite them to join a list of people that are willing to help EPICS students. Our second requirement was to create a separate webpage on the EPICS website to display this information for students to use. Our third requirement was to design the aforementioned webpage and organize it in a user friendly way. Finally we were required to research and implement additional features that would be beneficial to the website.

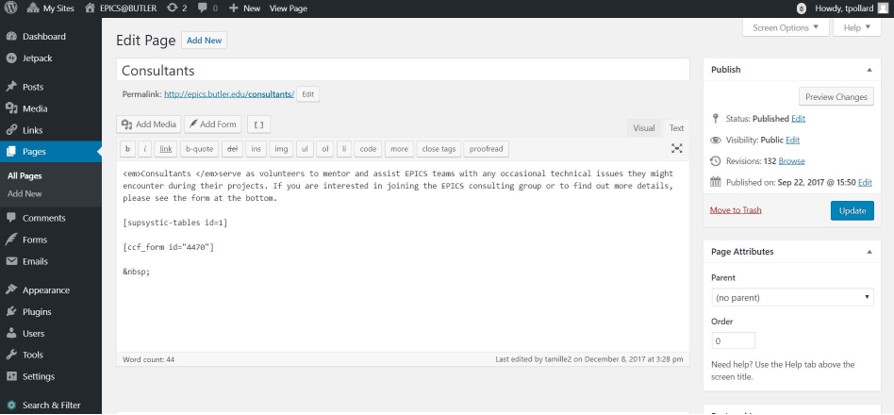
For the most part, our team began this project with relatively few assumptions about the upcoming project. The only major constraints were initially having to learn how to use Wordpress and not obtaining administrator access until later on in the semester.

Chapter 3

The entirety of our project was on the platform Wordpress. Initially after compiling the list of consultants, we began to hardcode a table into the website. We implemented four columns. The first consisting of the consultant’s name and picture. The second addressed contact information and hours of availability. The third included areas expertise and the fourth held the consultant’s title and affiliation. An image of the code for the table is attached below.

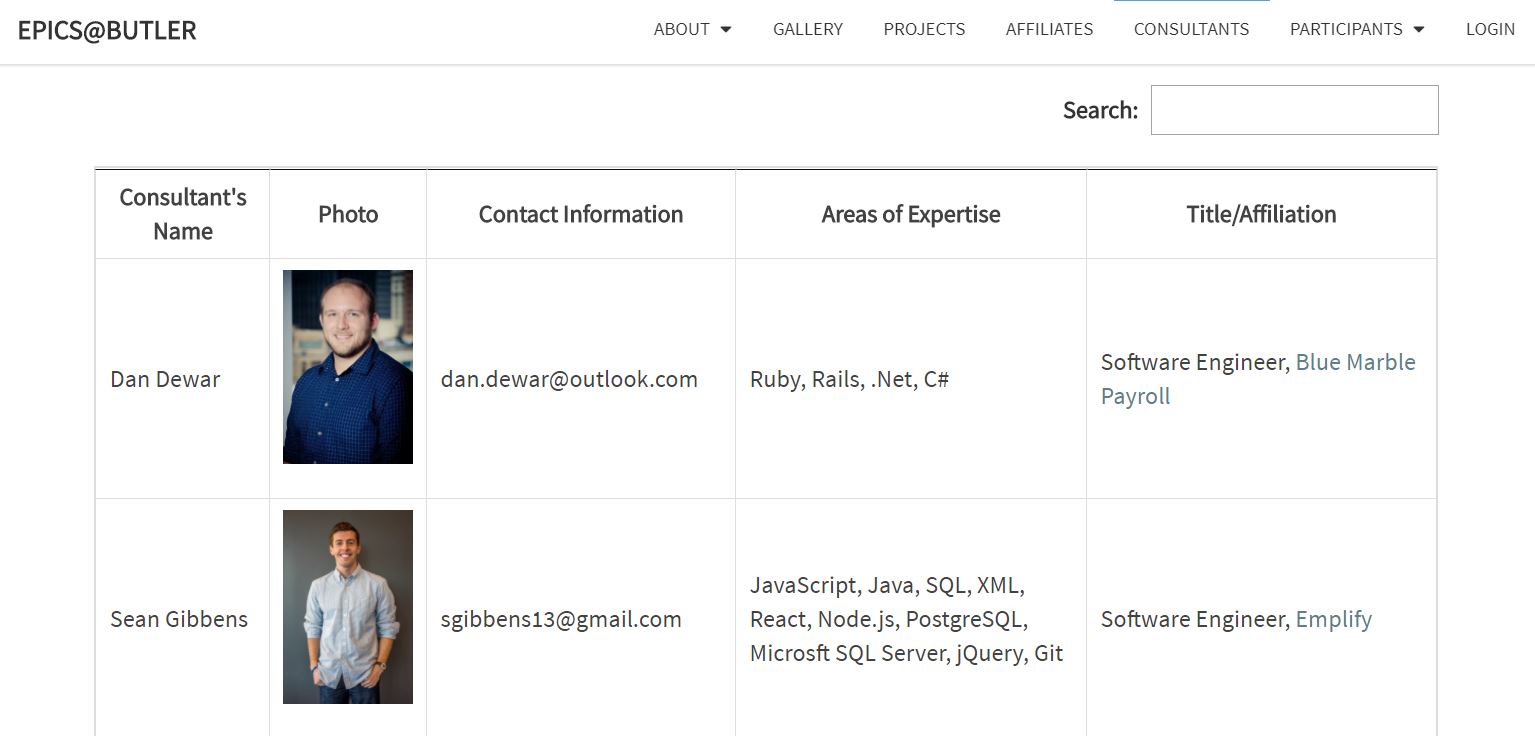


Once we were able to access the plugins, adding a search feature was one of our main goals. After group discussion and some implementation of the development website, we decided that creating a completely new table was our best option. In this table we added an extra column so that the name and the picture were separate. This table looked nicer, and allowed us to include a live search feature. A snippet of the table is provided in the following chapter. Below is the shortened code provided by the plugins.



Chapter 4

The design of our new table is simple and aesthetically pleasing. The new column to separate the name and the photo give the table a clean feel. The main feature added is the live search bar. This allows the public to search for a name or area of expertise. A picture of the top of the table and one of the search feature in use are attached below.



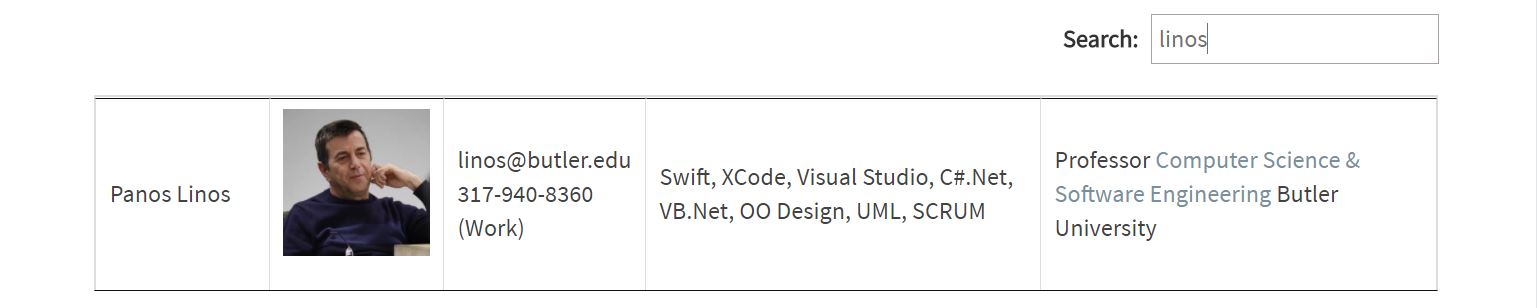


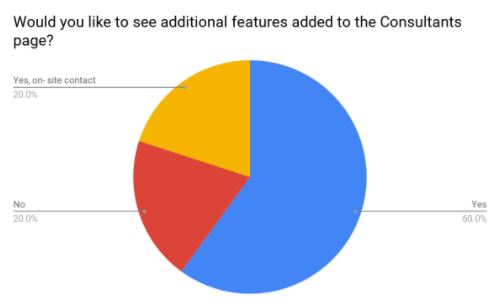
Chapter 5

Initially we began the project by creating a table and hard coding in the information. This was due to the lack of access to plugins as well as our lack of experience with Wordpress. Upon gaining admin access, we refactored the table with the use of a plugin. This method was vastly more efficient and includes more features. We also created a submission form that allows anyone visiting the page to request to be added to the page. It was implemented in a way very similar to the newer version of the table.

Chapter 6

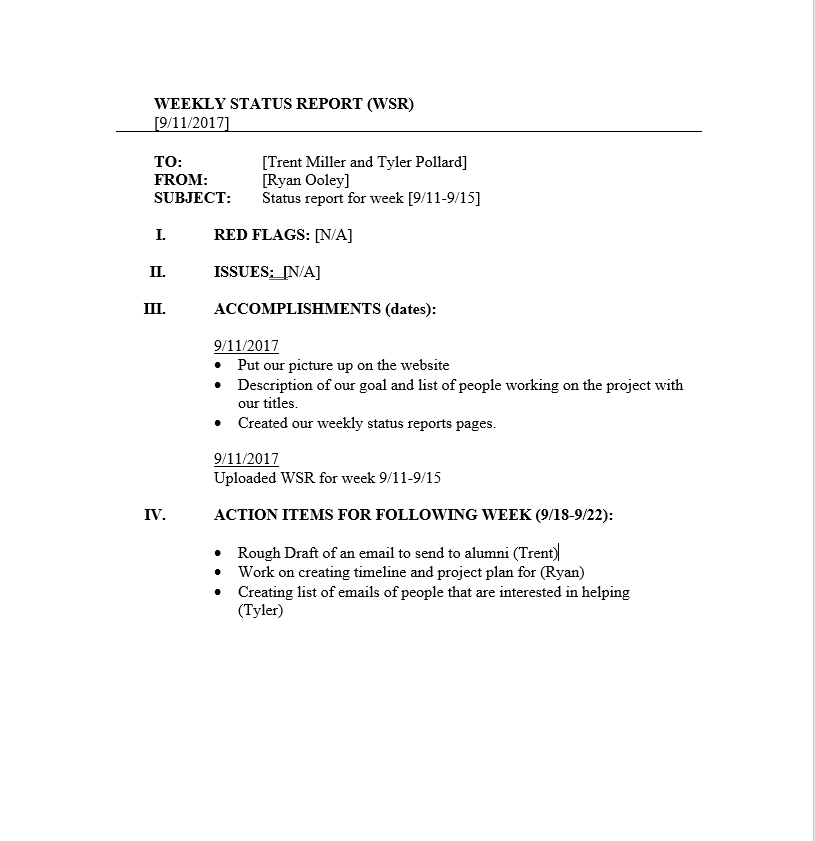
After designing the initial webpage, we reached out to the consultants and asked them if their information was correct, as well as if they thought any additional information would be beneficial to have on the site. Later in the semester we created a survey for students to complete, asking them for their opinion about the visual appeal, information listed, and any functions they would like to see added. Below are the results from this survey and testing of the search feature that we added.

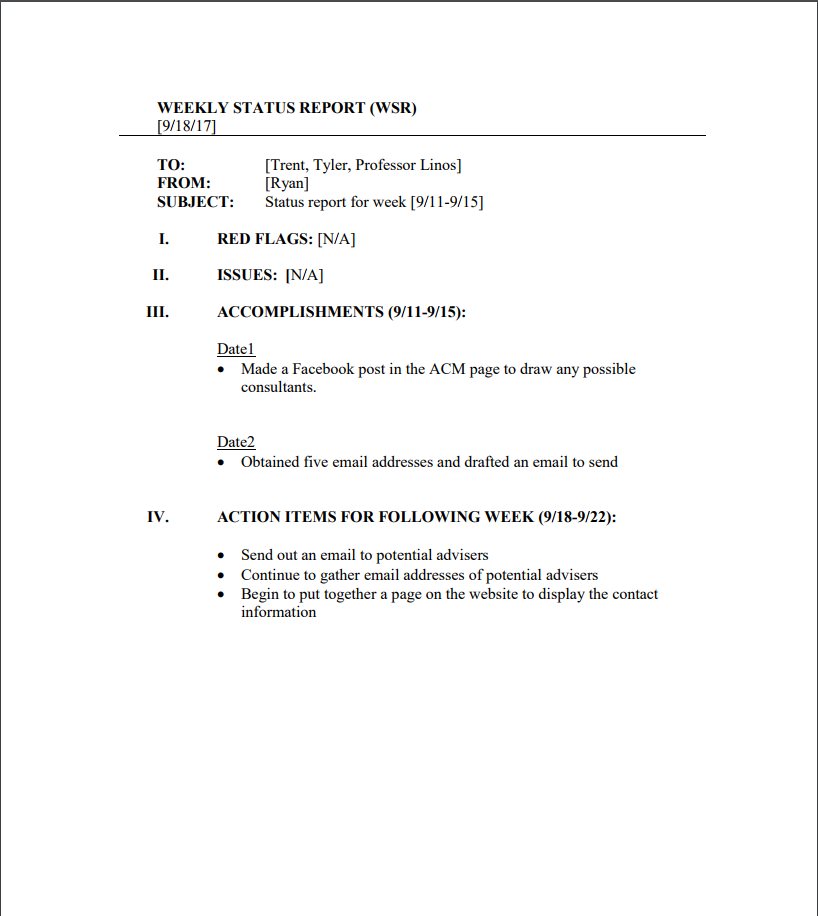


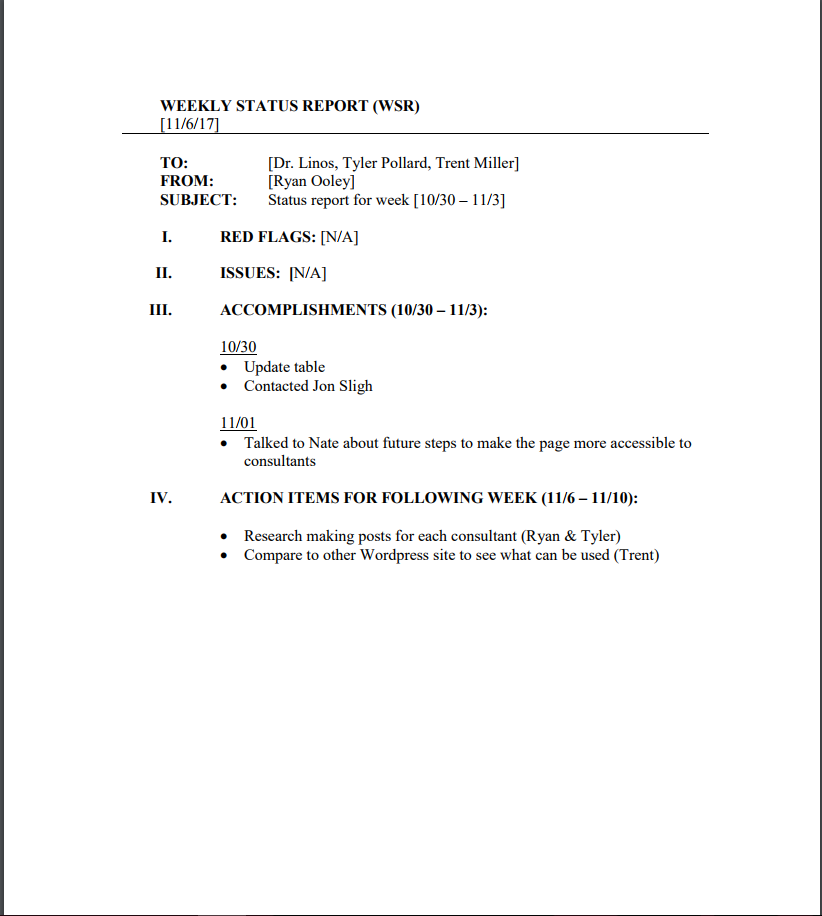
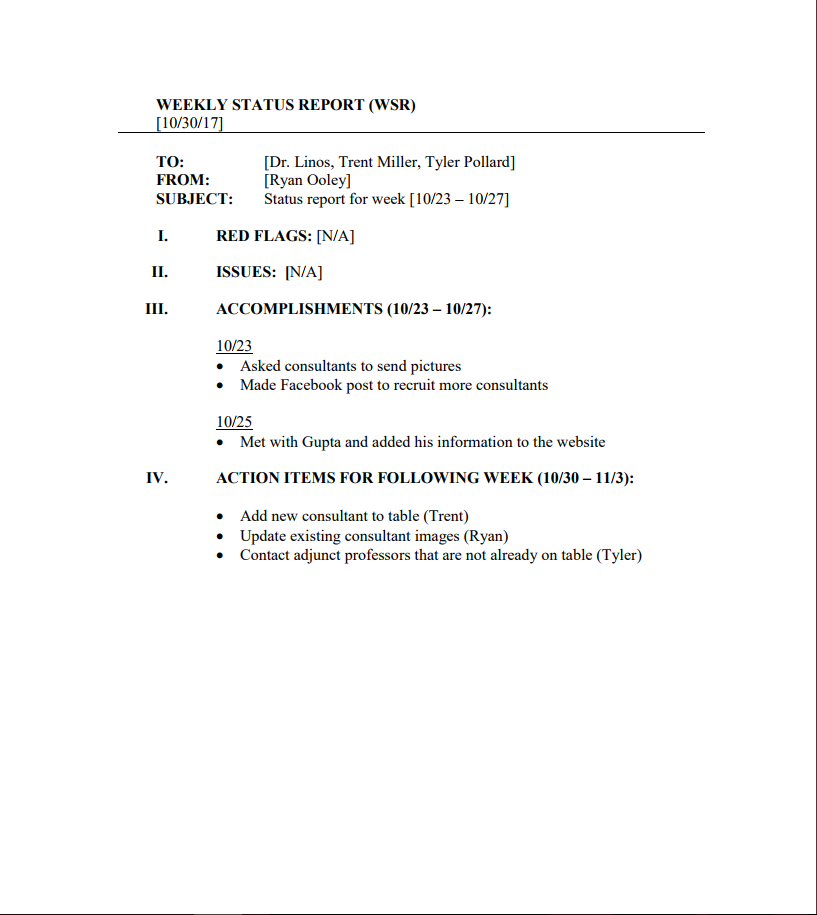
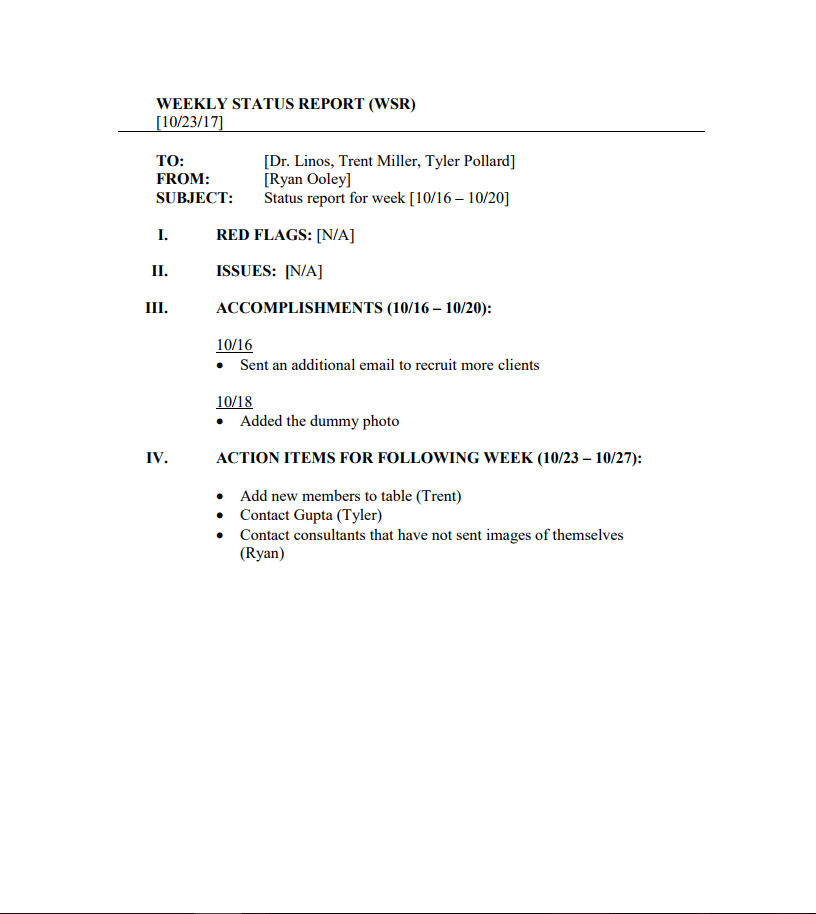
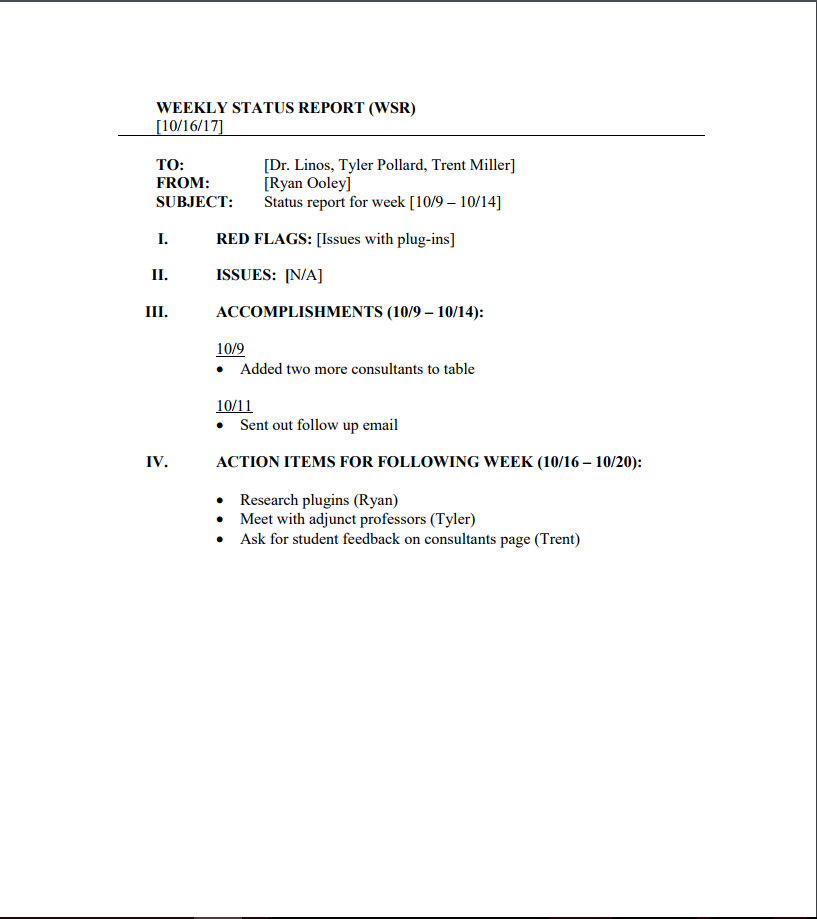
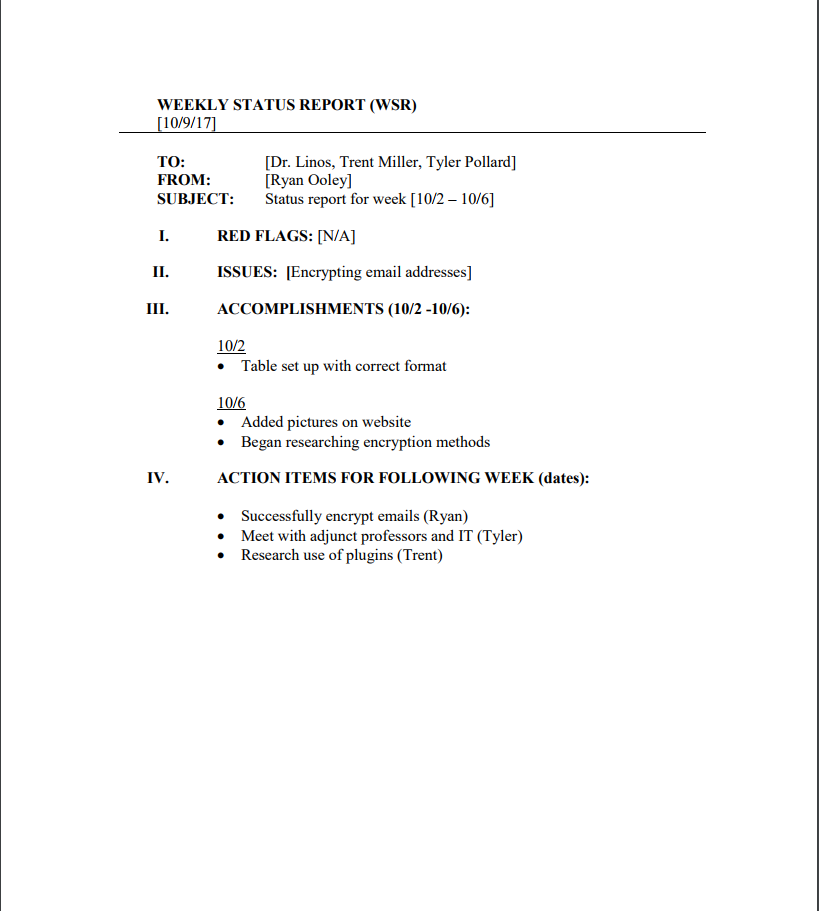
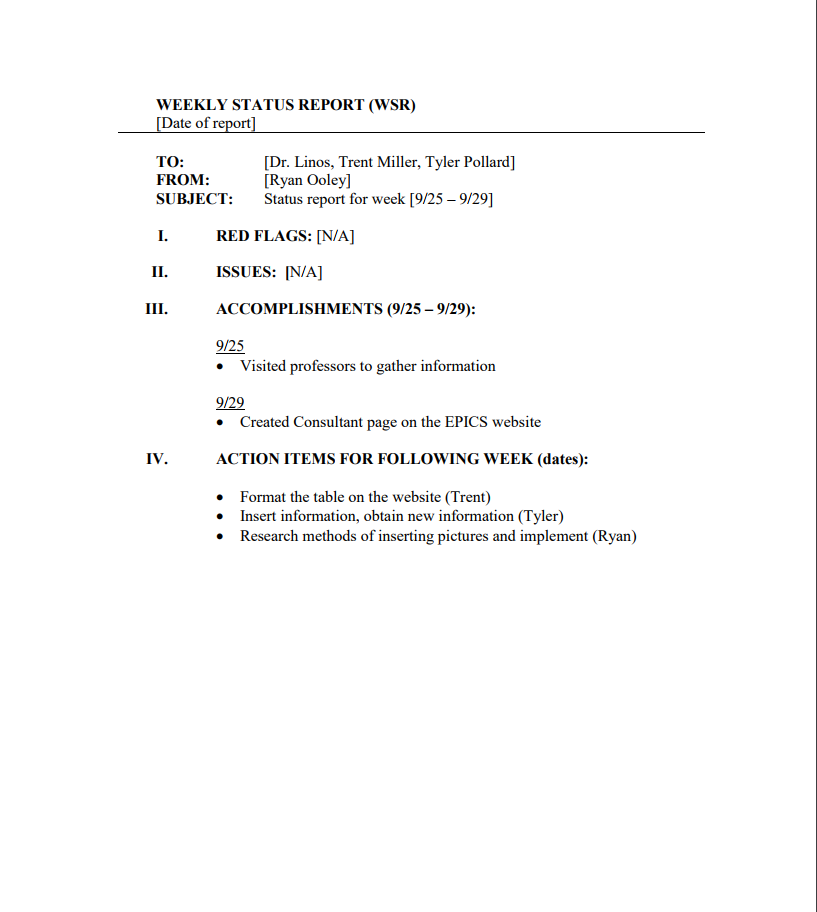
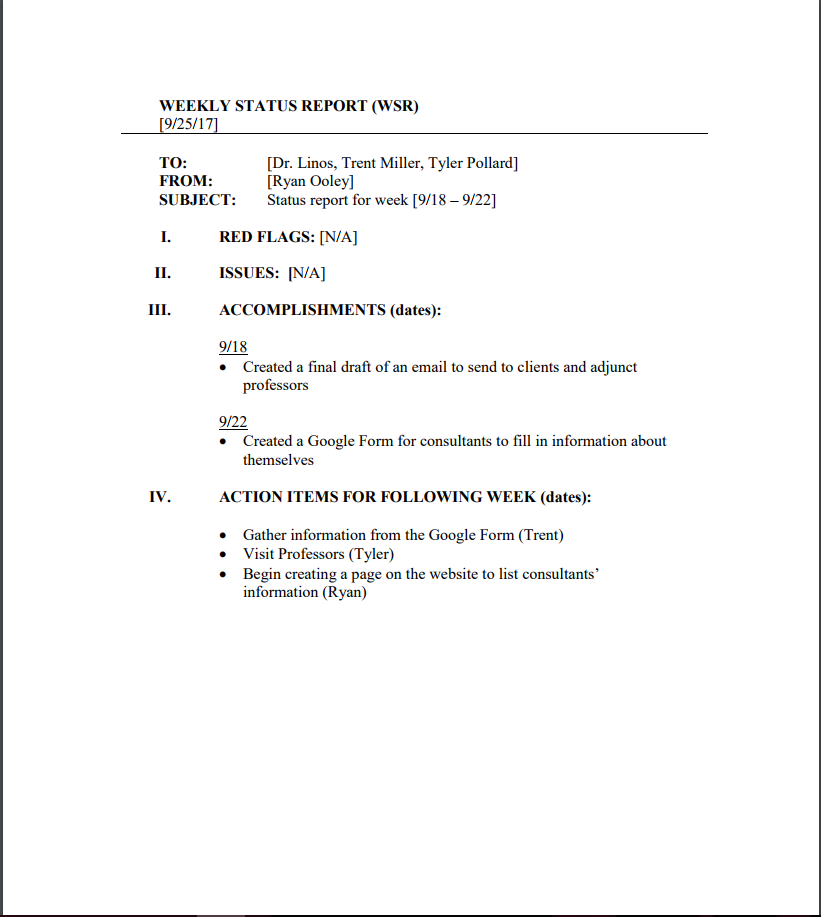
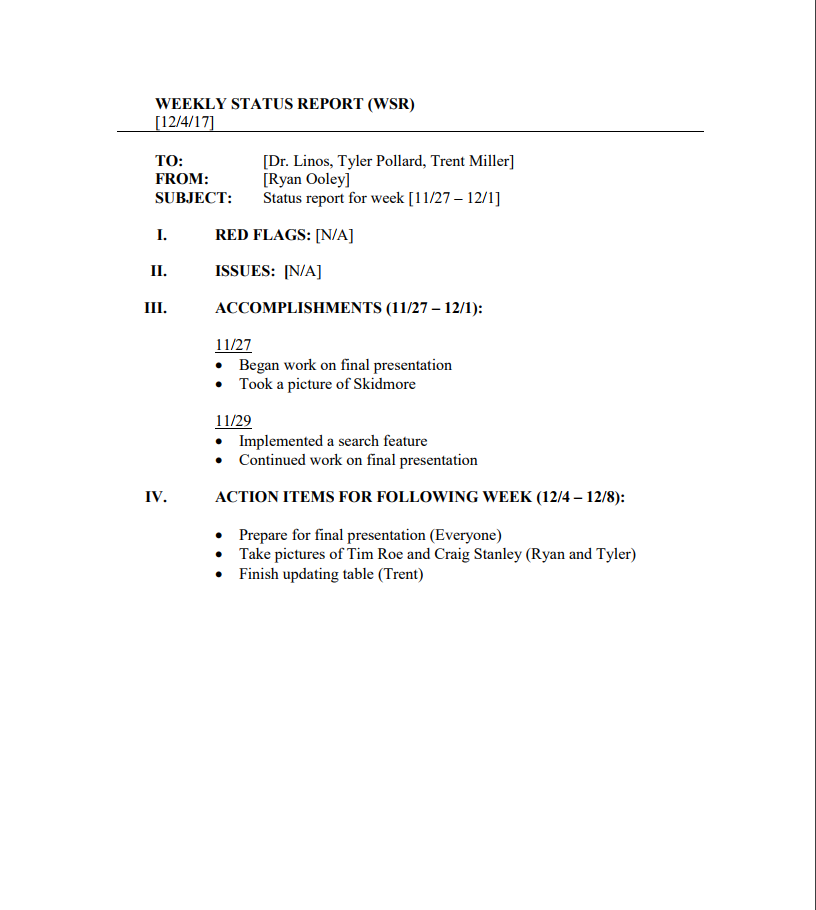
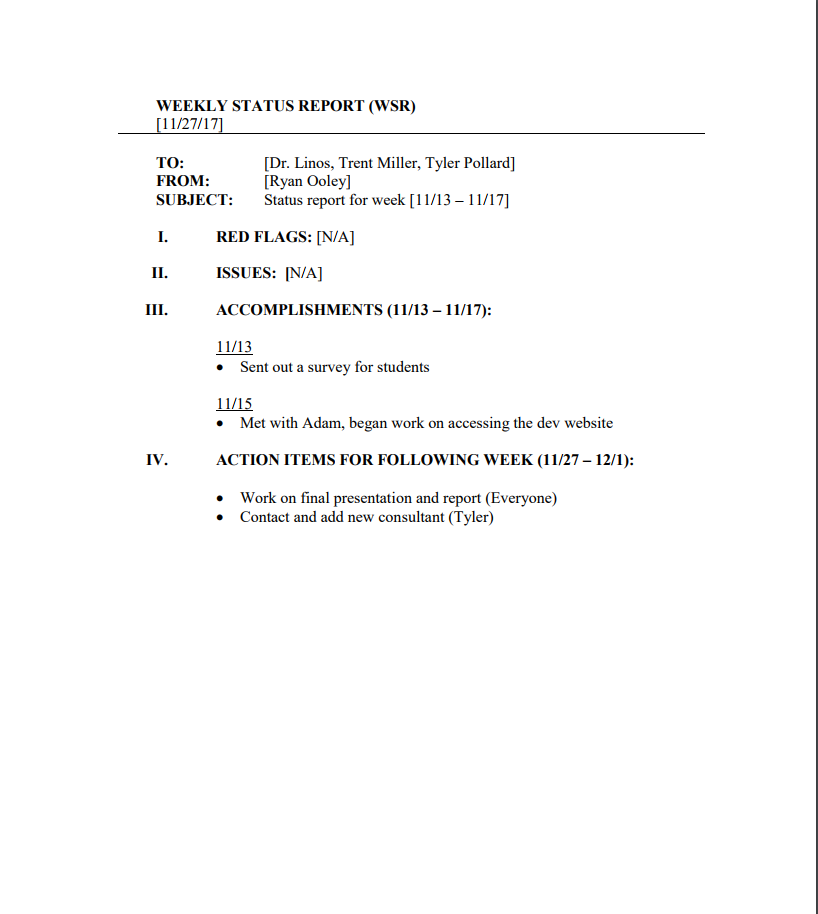
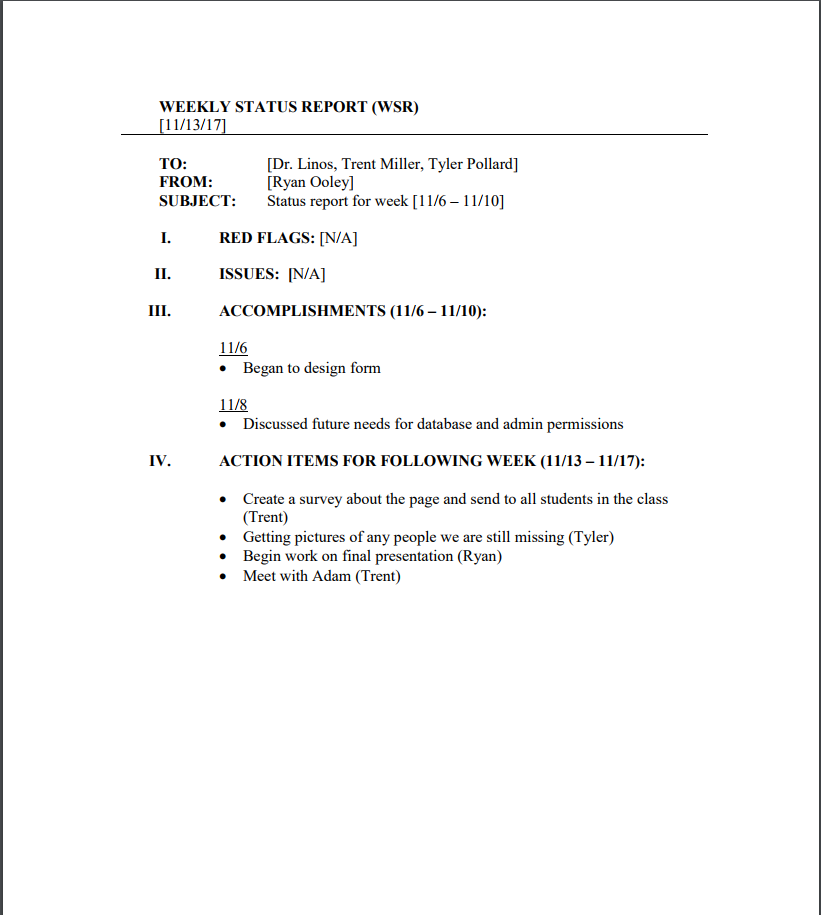


Chapter 7

Our work environment has been very relaxed. Each team member has their own strengths and weaknesses, but where one person lacks, the others excel. Ryan Ooley, the team leader, did most of the planning for the team. He decided the priority of tasks to work on, as well as helping with some of the technical aspects of the website. Trent Miller did the majority of the technical work on the website. He coded the initial table design, and did most of the work implementing the new table design. Tyler Pollard’s role was to handle all communications. Any time it was necessary to reach out to the consultants or potential consultants, Tyler contacted them. Our team worked as a team whenever possible. While each person had their own role, the most work was completed when everyone was together. The majority of our meetings were during class, however, whenever possible those who were available would meet with the clients during their regularly scheduled meetings. Closer to the project’s completion, and with the addition of administrator access, the team began to meet once a week outside of class to make sure the project was nearing a presentable state. There were no conflicts to note, the team worked very well together.

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Operating the system we created is very simple. Upon arriving at the Consultants page of the EPICS website, the table with consultant information can already be seen. If the user is looking for something specific, this can be a name, area of expertise, email address, job title, or place of employment, they can type any of these things into the search bar. As soon as they begin typing, the table will begin to narrow down the search results for the user. If the user would like to see themselves added to the list of consultants, this can be done as well. At the bottom of the page, there is a contact form consisting of a few textboxes. The user can fill out their information in these textboxes and submit their information for review. If our client wishes to see them added to the Consultants page, he will contact them, ask for a picture to use, and have them added to the page.

Chapter 8

Some things that still need to be done in the future are to implement the unused plugins that we did not get to. We would like to see a message board type feature implemented. We installed BuddyPress which is a message board type plugin where consultants and EPICS teams can go and have a message system right on the website itself. Something that will always be a work in progress is to keep searching and adding additional consultants to the consultants table. Another thing that needs to be added, is a way to LiveStream the EPICS presentations, so that if a client can’t make it, or they live elsewhere, they will still be able to view the presentation. One of the biggest necessities for the Consultants page is a database backend. Currently, all of the information is stored in a table on the page, but it has to be manually put there by an administrator. A future goal is to have all the information saved in a database for easier access and storage.