# Project Diary:

***29/07/2021:***

Forgot to make entries into my project diary for the summer. This will be my first entry. Today I worked on the login feature on my web app and added some validation code. Right now I am able to login with validation checks, which changes the options on the navbar providing the user with a logout button. The logout button now works. Still quite a bit of work to do to get it fully working though.

***30/07/21:***

Today I worked on a feature that added a badge to the patients tab on the navbar that indicated to the user how many patients were there. I managed to get this working but there are a few changes that I will have to make to make it do exactly what I’d like, but I feel like I have the heavy lifting done in regards to that feature. I hope to continue working on the webapp for the next week or so before linking it with the Arduino code that I have working with my oximeter.

***31/07/21:***

Today I worked more on the badge that indicates to the user how many patients are in the system. I got it working as it should now and I am happy with the result. I also worked more on the login feature and made some progress albeit not as much as I would like as I was busy today. I will put in a longer day tomorrow and try to get a big portion of the web app done.

***02/08/2021:***

I forgot to log my diary yesterday. Both today and yesterday I worked on the routes on my webpage making sure every page was being rendered and that the links were working correctly. I feel like the page is really coming along nicely now as there is a real flow to it. I was having an issue adding photos locally to the page which was time consuming but then I found a way to do it by linking to google drive and that seems to work great. I am currently working on the information page and expect to get that done tomorrow.

***03/08/21:***

Didn’t get to as much today as I would have liked. But managed to create a logo using adobe spark and personally I think it looks good in the project. Apart from that I worked on my information page some more but have not completed it. This should definitely be done tomorrow.

***05/08/21:***

Yesterday I felt a bit ill, so I didn’t get much work done. I finished my information page, and I am quite happy with that. Today, I created a ‘Create a Patient’ page where the user can create a new patient themselves within the webapp I was really happy to get this working as I thought it could take longer.

***08/08/21:***

Today I worked on the profile page. This page is accessed through my patients page by pressing the ‘view patients details’ on a particular patient. This brings up a page where that patients details are. I did this by using the findById method and it worked really well. I also added a graph where I hope to enter the patients oxygen levels.

***09/08/21:***

Today I worked on getting my automated email feature working. I implemented ‘nodemailer’ which I have gotten to work with no issue. I have also gotten to send emails to specified patients in the profile page which I am very pleased with. For now I am using a button to send the email but this may change in the future. Tomorrow I am going to look into getting my esp-32 to publish the readings from the oximeter on AWS.

***10/08/21:***

Today, I added wifi capability to my esp32 code. I then set about looking into setting up my AWS. I followed Brian o’Shea’s instructions and managed to get my project hosted on AWS. I originally planned to get the esp32 code working with AWS today but Brian’s instructions covered hosting the webpage up there first so I decided to do that. Very happy I was able to do it. Tomorrow I will investigate publishing the sensor values.

***11/08/21:***

Today, I started looking into getting the AWS IoT core incorporated in my project. I followed a tutorial to get my esp32 to publish readings to the esp32 IoT core. I couldn’t get any readings to come through. I will investigate further tomorrow.

***13/08/21:***

I started the tutorial from the beginning today and I discovered the issue was a problem with the aws certificates referenced in my esp32 code. I can now see the oximeter values in the MQTT client test section on the AWS console. The next step is to subscribe to the to my publish topic from the node JS app.

***15/08/21:***

Today, I followed a new tutorial where you can subscribe to a topic from the node.js app. I followed the instructions but I am not seeing the readings in my console. I know it is not the on the esp32 side since it is publishing to the test client. Will try again tomorrow.

***16/08/21:***

Today, I spent hours trying to get my app subscribed but it still will not display the data. I cant figure out the issue the code is the exact same as in the example code. I’ve tried changing the code multiple times but nothing seems to work. I created a new ‘Thing’ with new certificates and a new policy but nothing has worked. It does appear however, that I am connecting with the ‘thing’ so it appears the certificates are correct.

***18/08/21:***

Today I Finally got the values to appear in my console. It was a very easy fix in the end and it was frustrating that it took me this long to figure it out. I had left one line out of my policy I’ot: receive’ which not allowing me to subscribe. Tomorrow I will try to parse the data so I can use it with mongodb.

***19/08/21:***

Today, I manged to extract the data I needed from the payload and saving it to the mongo database under the patient called Brian Sharkey as an example. A had to change the patient schema to have bpm and spo2 as an array instead of single number. I can now see the oximeter readings are being saved in mongo.

***20/08/21:***

I had an issue with the way the data was being displayed in my chart in the profile section. It would only display the first few readings and was not responsive. I managed to rectify this by passing a new variable with the data and now the chart shows all the data. I feel the project is more less done now but I have a bit of cleaning up to do around the code. I also will start my report..