

# 1. What did you work on this past week?

There have been four major topics this week:

## a) [App Prototype](#)

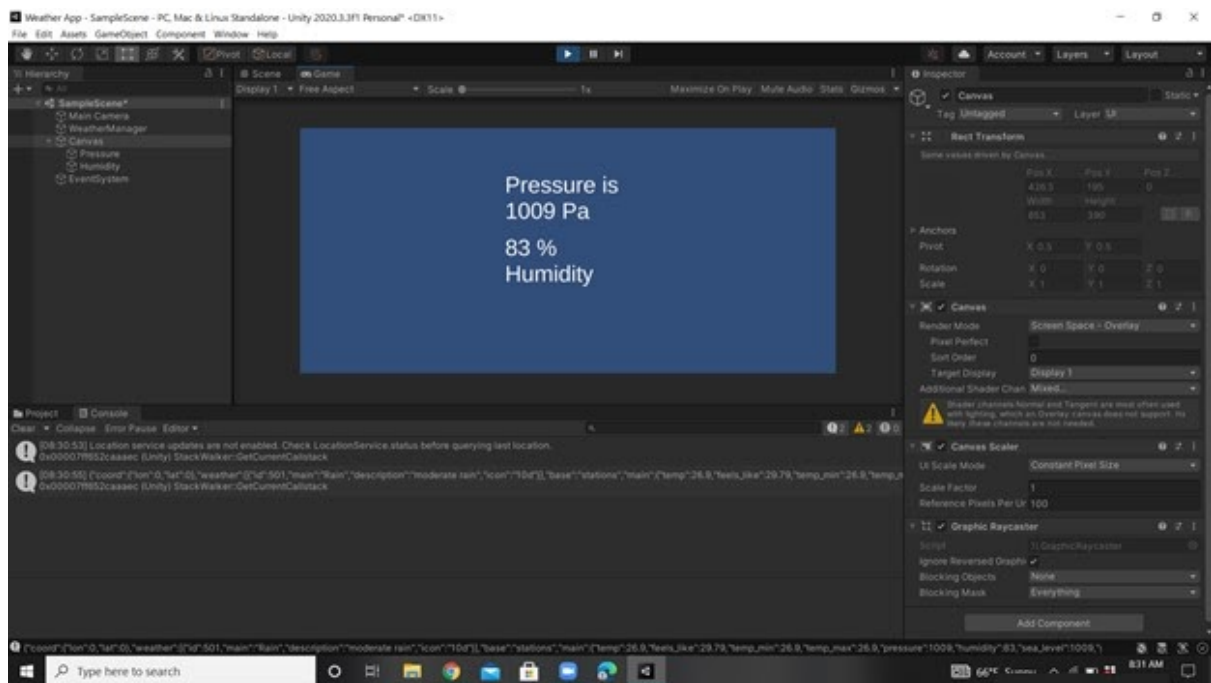
To give a general overview of what the app should look like, we designed a prototype. This prototype contains all the frames our product will have in the end. It gives an idea of how they interact with each other and what they will look like.

This Prototype is now ready and gives a reasonable layout for the designing and implementation of the application.

## b) Weather data with GPS Module

To use the weather forecast and historical data we need to retrieve this data from a cloud resource and make it accessible in the application. If we want to retrieve relevant weather information we have to use the GPS location of our user.

We found a module we can integrate to access this data. This can be integrated via unity to our application.



## c) Database solutions for storing data and communicating between alexa and application

There is the need to store our data in a secure and accessible way for all our clients (in form of the application). We also wanna be able to use an Alexa Skill to write specific data to our database, so that we can access and analyze this data afterwards.

We decided to use the Google Firestore (a Cloud NoSQL solution) as it provides an easy integration to unity as well as to alexa. We also integrated firebase to alexa for demonstration purposes.

So far there have been some issues integrating firebase to unity and we couldn't build an ios app with firebase integration yet.

#### d) Alexa Skill and interactive voiceflow

We prototyped an alexa skill in voiceflow to show how we want to ask the user for their well-being on a daily basis. Furthermore we prototyped an alexa skill which can write to our database. The task for the next week will be to integrate those parts together.

We provided demo videos for the [Alexa Skill on Voiceflow](#) and the [Alexa-Firebase integration](#).

All our Videos and other resources can be found in our [Google Drive Folder](#) for this week 7.

## **2. What will you work on this coming week?**

#### a) Combine Alexa Skill with database solution

We already have a flow for our alexa skill and we know how to integrate firebase to alexa skills. The task is now to export the voiceflow project to ADC to let it access the firebase firestore.

#### b) Design a database structure/architecture

We have to think about the structure of our database and how we want to store the generated data in there.

#### c) Accessing Apple Health Data

We have to integrate the Apple Health Asset to work with unity so that we can use the data generated by the user's iPhone. This data should be provided to be analyzed afterwards.

#### d) Pseudocode the Algorithm for Data Analysis

The key feature of our app will be a predictive score on your risk of migraine. We have to develop an algorithm which can analyze the provided data to make that prediction. Therefore, we have to analyze the key aspects interfering with your personal risk of migraine and how they influence your daily risk.

e) Implementing app layout

We will integrate the basic layout in a unity project. On that we can add firebase integration and predictive data analysis algorithms in the week afterwards.

### **3. What is in your way or impeding progress?**

Issues with building for ios with firebase from unity:

Integrating Firebase to Unity was kinda straight forward, but building for iOS has repeatedly run into [problems](#) we were not able to fix so far. We are going to try building on other machines the next few days, maybe that is going to fix the issues.

[Asset](#) for accessing apple health data is not for free (\$40)

There is an Asset / module for Unity which can access apple health data so we can use that data for our algorithm. The problem with that asset, which is as far as we know the only one of its kind, is that it is not free so we were not able to try it so far.

Last but not least do we are using a lot of new technologies right now: We have never worked with Unity and C#, nor Amazon Alexa Skills and javascript. That's why we run into a lot of small problems which cost us a lot of time. Those could be avoided if we had more experience in that field.