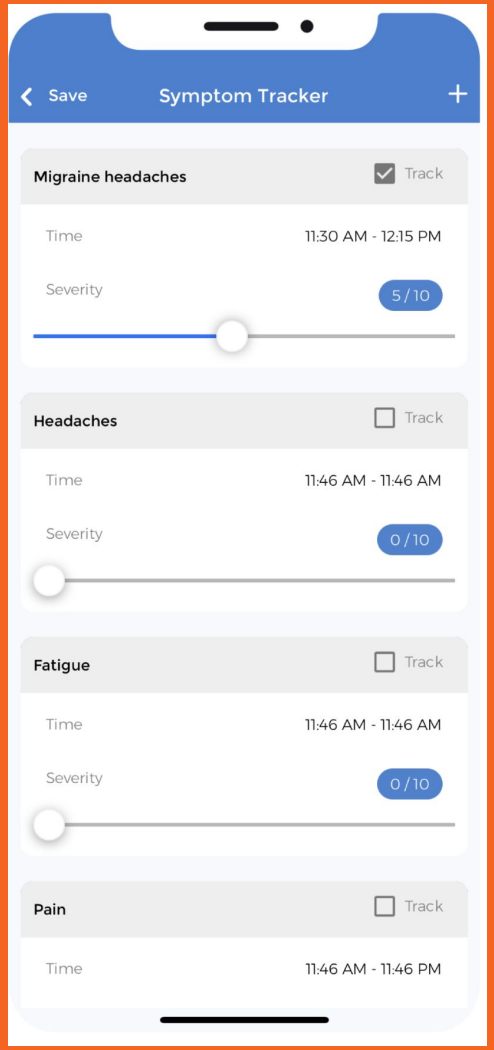
Modern Migraines

An innovative way to track and predict your migraines

39 million men, women and children in the U.S. struggle with migraines worldwide it's about **1 billion**

This is as much as the total population of California

Current Migraine Trackers

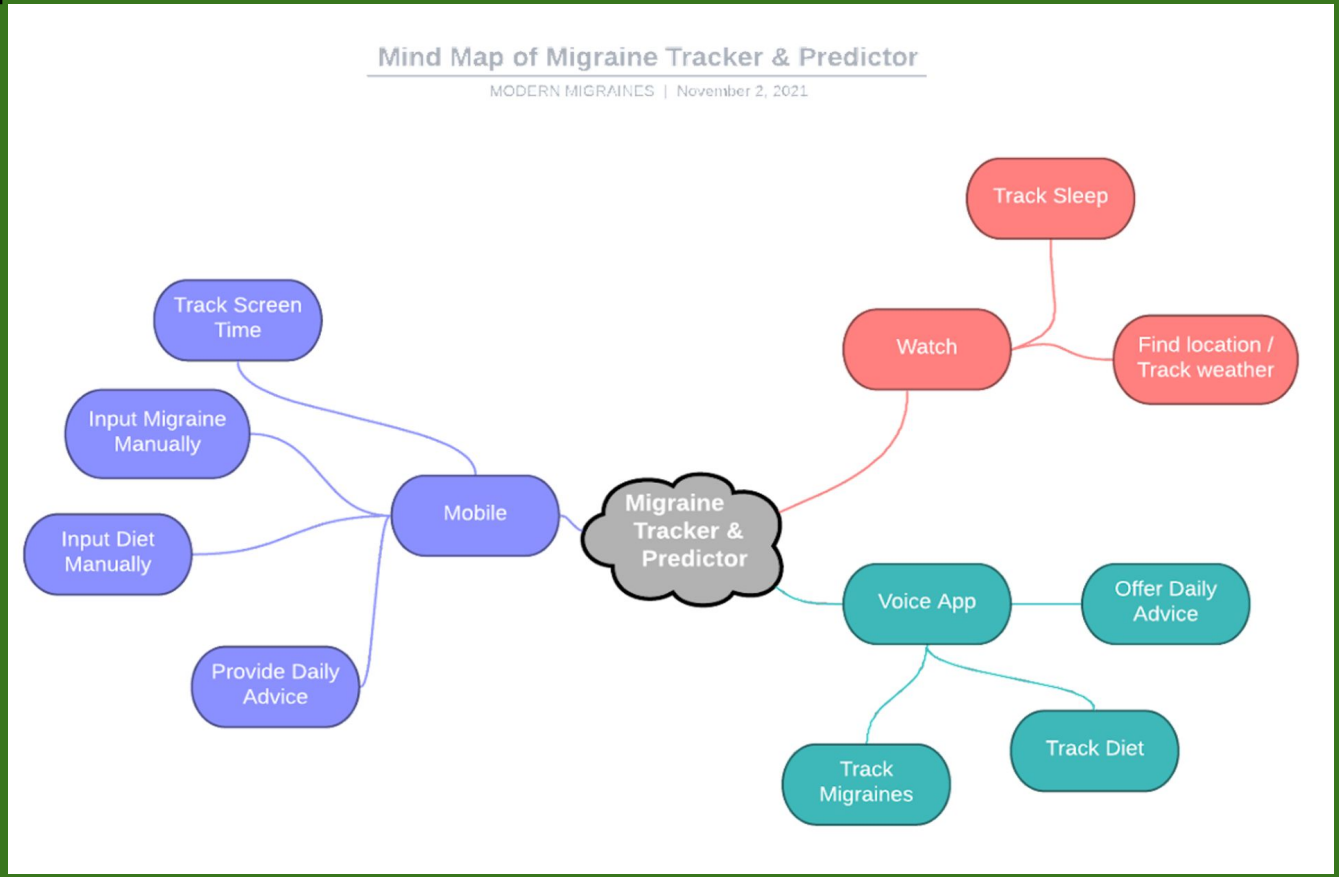


Motivation and Solution

- Help migraine victims track their personal triggers
- Use modern technology to address migraines
    - Phone sensors, Voice assistants

Phone App	Phone App	Watch App	Watch App	Voice App
Migraine Buddy: Track Headache	Migraine Monitor	Apple Health	Samsung Health Monitor	Headaches treatment
Tracks migraines and uses information (hormonal, diet, forecast, sleep... etc.) to give advice Manual entry required for information within the app	Allows for people to track their symptoms throughtout the day and share with their doctor Difficult to manually input the data into the app -- particularly if someone has a migraine already	Has the capability to add sleep data and track symptoms to track migraines and headaches in the phone app Hard to find, easily forgotten in all of the health data	Can measure step count, blood pressure and take ECG Does not provide any information for migraine/headache tracker	Skill provides one hour of soothing music to help with stress, headaches, or migraines Does not track symptoms or give advice as to what led to migraine/headache
Does not take into consideration Screen Time	Does not account for people having migraine not wanting to go on a screen	Doesn't account for all the factors that could contribute to a Migraine	Does not take advantage of any of the features the app tracks to help with watches	Does not ask you about your migraine/headache

Design


Mind Map of Migraine Tracker & Predictor
MODERN MIGRAINES | November 2, 2021
Migraine Tracker & Predictor
Mobile
Track Screen Time
Input Migraine Manually
Input Diet Manually
Provide Daily Advice
Watch
Track Sleep
Find location / Track weather
Voice App
Offer Daily Advice
Track Migraines
Track Diet

Mind Map of Migraine Tracker & Predictor

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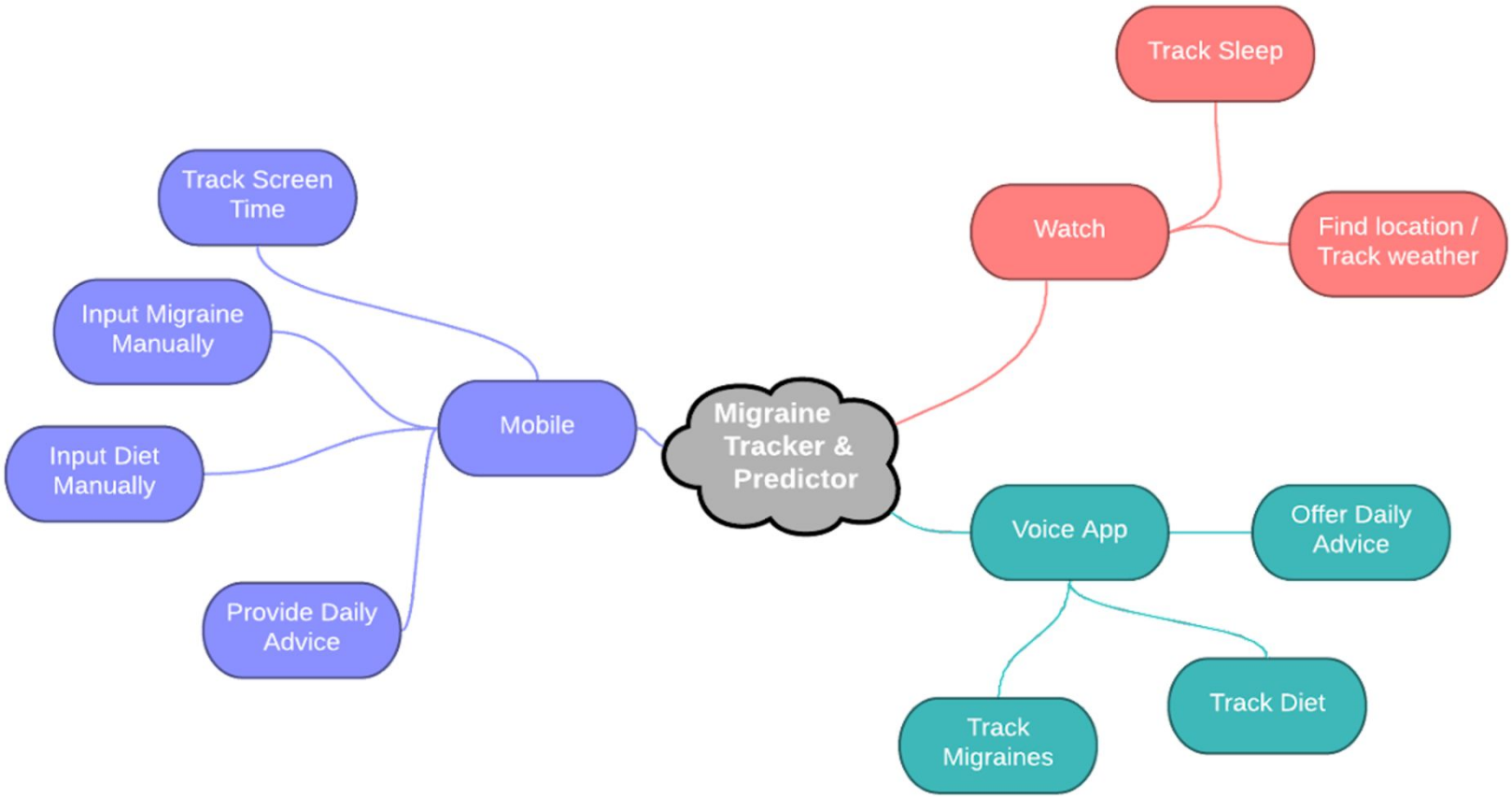
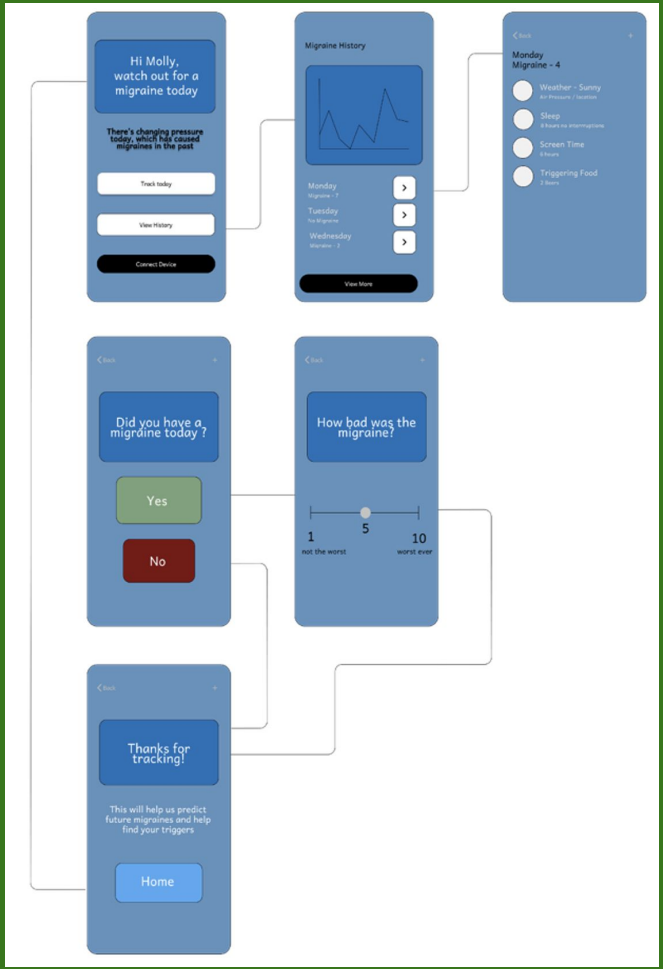


Initial Wireframe

Focus on simplicity

Make it feel “easy to use”

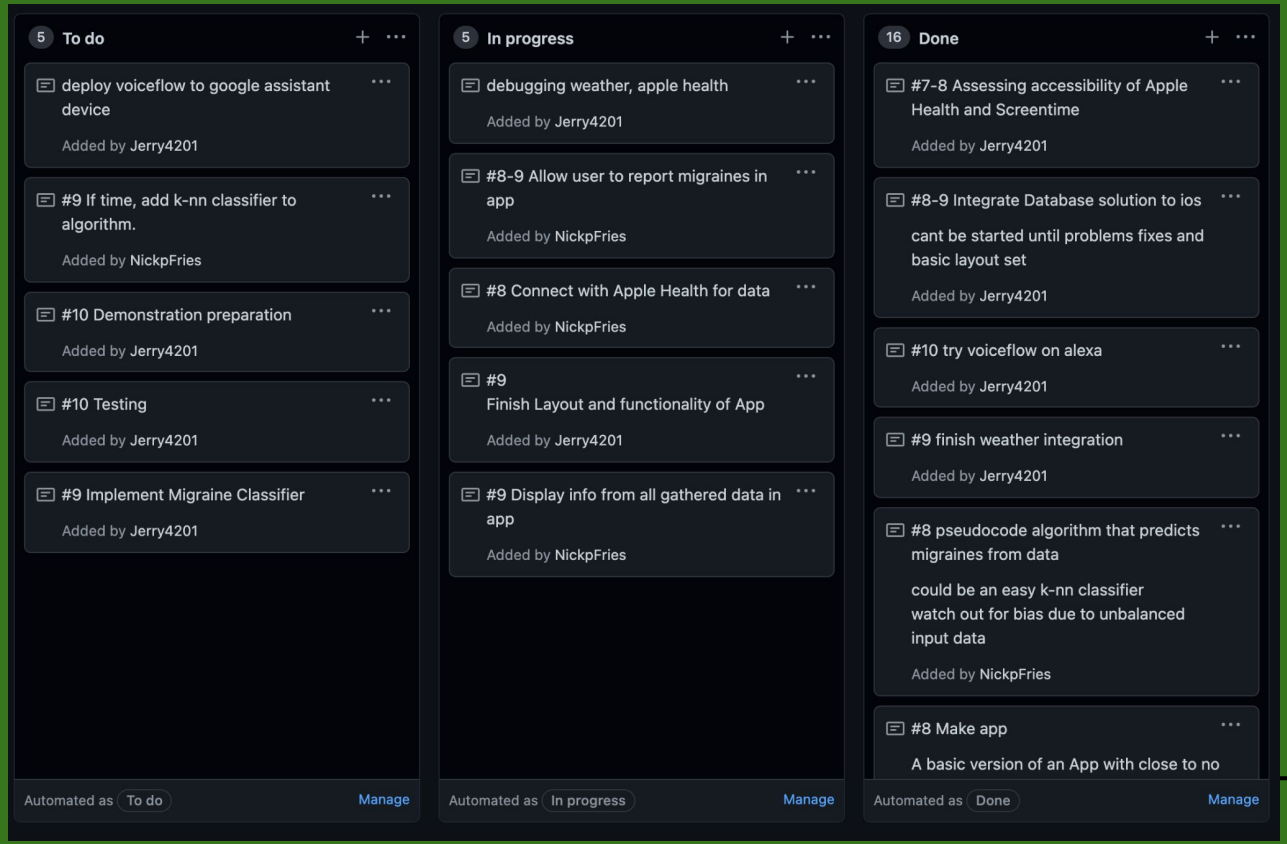


Final Design

Research on color and font

Make it easy based on research

Collaboration



- Dynamic Team
- Used Git repo & Git Project tools
- Constant communication and meetings

About us

Delia McGrath, TCD, IRE

Major - Computer Science
Minor - Mathematics

Design, Interface and Integration

Nicholas Fries, UCSD, US

Major - Computer Engineering
Minor - Mathematics

VUI, Weather API and Migraine Risk Assessment

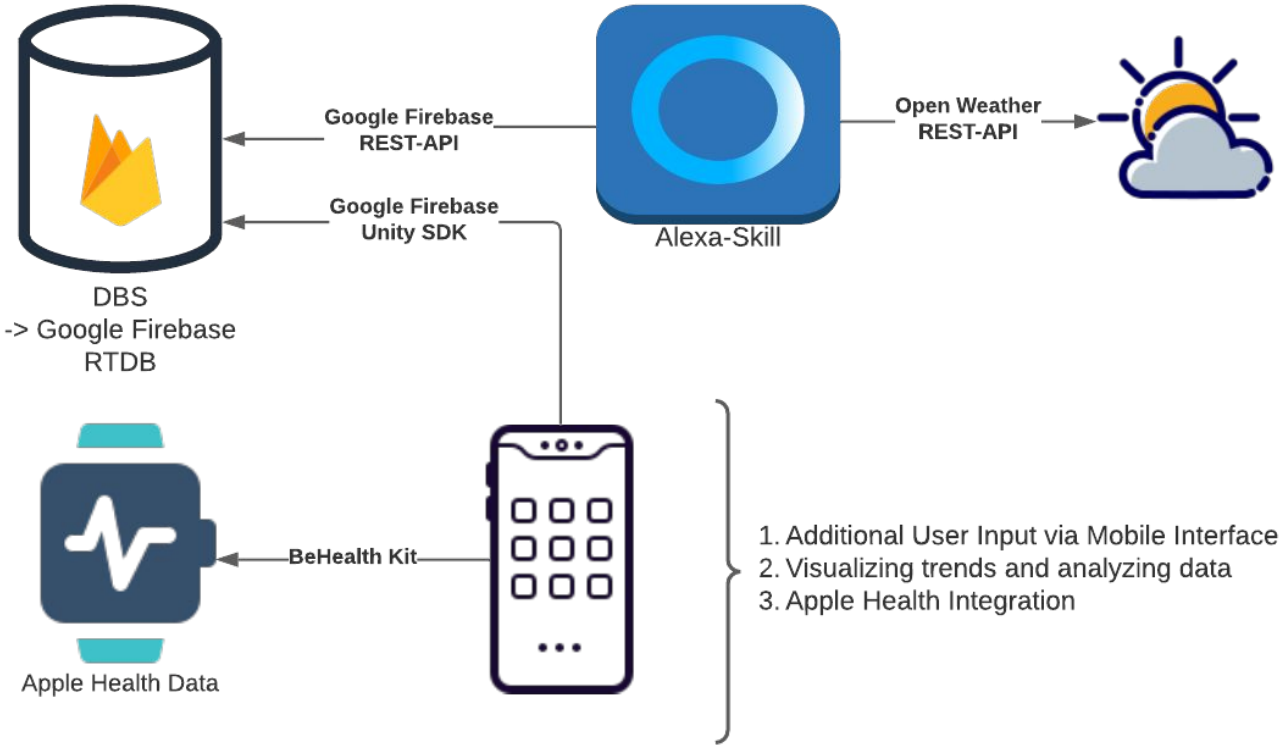
Julian Strietzel, KIT, Germany

Major - Computer Science
Minor - Management

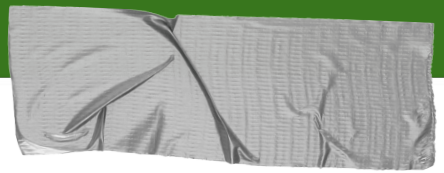
Backend, Data Management and Integration

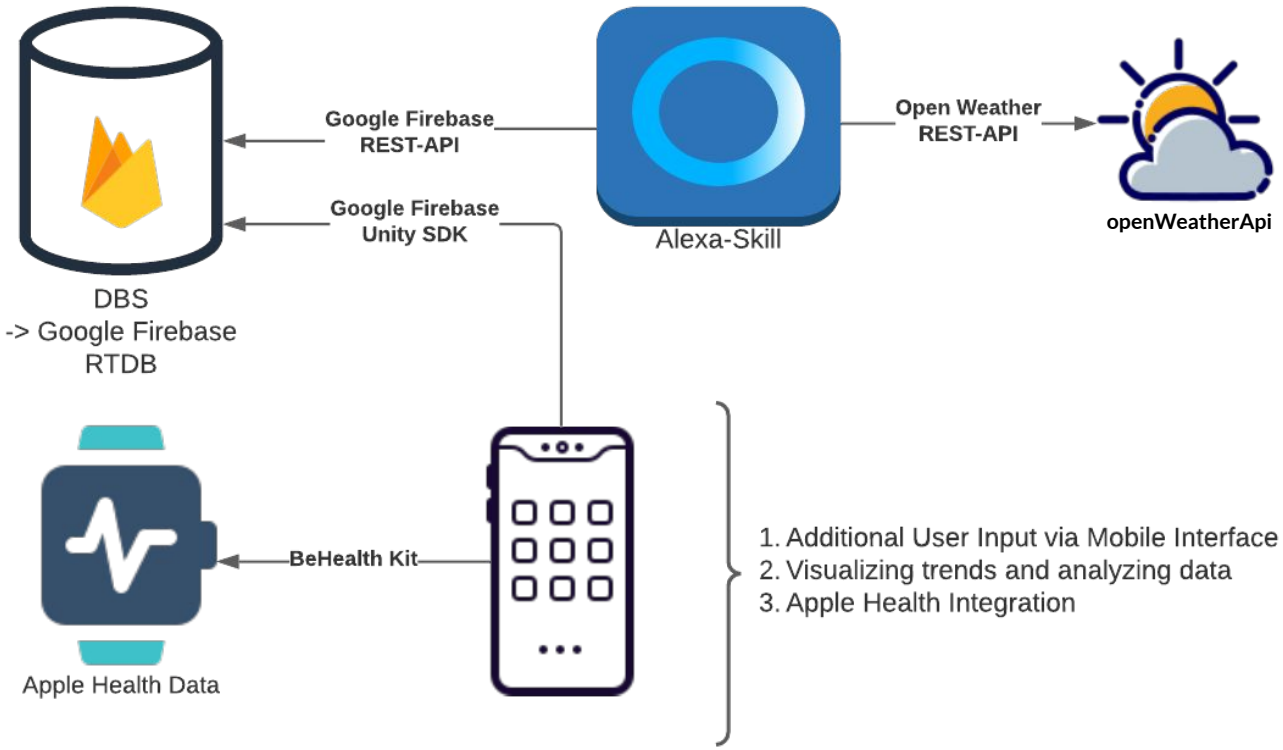
Coming from all around the world to make the best migraine tracker & predictor

System Design



System Design





Features

- Tracking your migraines
- Analyze & identify your triggers
- Predict your daily risk for migraines

- Voice Assistant integration
- Add weather and apple health data

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We're still getting enough data to be able to predict your migraine

[redacted]

Your general risk for getting a migraine today is 50%

[redacted]

Explore Today

Rate your migraine

What is the difference between general and personal risk?

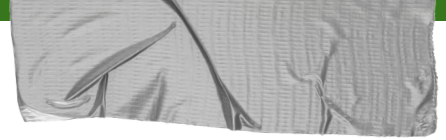
5

Submit

< Back

Information for today:

05/12/2021
migraine: False
symptomsFalse



15:24 Thu 2. Dec

22 %

Did you have a migraine today?

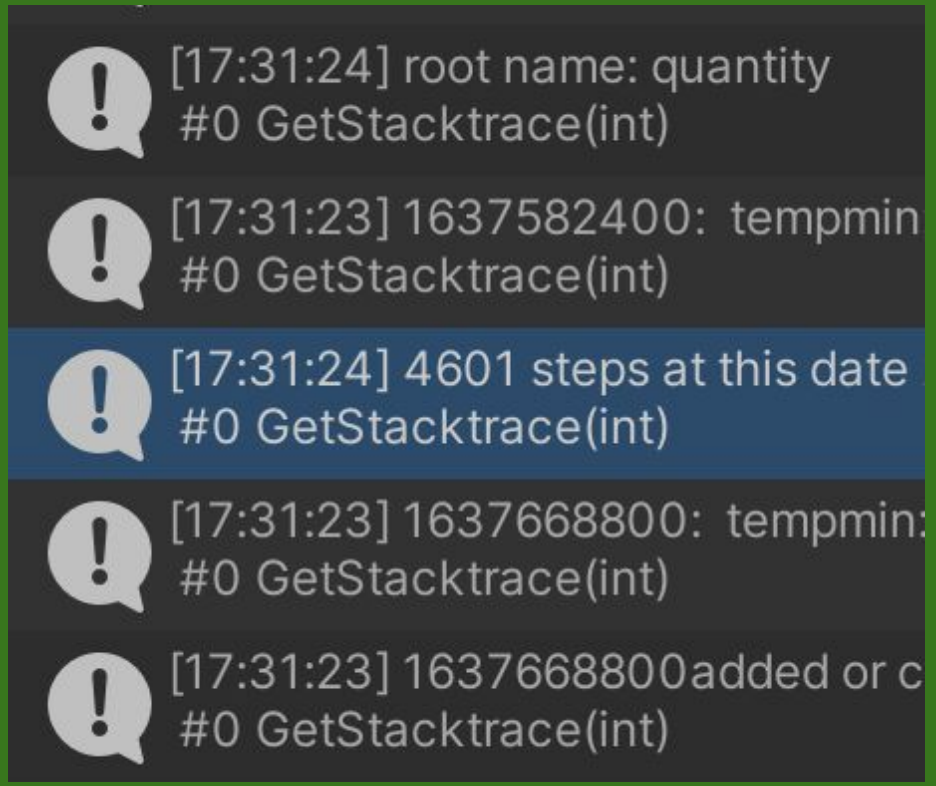
yes

On a scale from 1 to 10, how severe?

7

Noted, you had a migraine of severity 7 today.

Demo left the conversation



openweathermap api

apple health integration

Evaluation

New and unique application	Paving the way for future work
Modern tools to the hands of users	Integrating VUI, HealthKit and Weather
Automatic Analysis and enabling technology	Helping the users to help themselves

Future Work

- Track additional migraines triggers
- More tools to analyze your data
- Notifications on phone and Google Assistant
- Integrating Machine Learning Algorithms
    - to learn to predict migraines from historic data

App Demo