Simple Fit

a web-application using Polar H10© and Polar Verity Sense©

Changes

React

- Got rid of basic HTML and migrated the project to reactJS
- One page for each sensor
- There is not going to be a database
  ➜ Focus on cloud deployment
- We decided to leave the accelerometer measurement out completely because it does not fit in our envisioned prototype
- Decided against the use of PPG data (for now), because the documentation is not sufficient

Struggles and success

Struggles

The data is still not visualized in a user friendly way

Reading the PPG measurement is difficult

Implementing ACC-Support is unreasonable

Since data is on byte level, endianness is a problem

Success

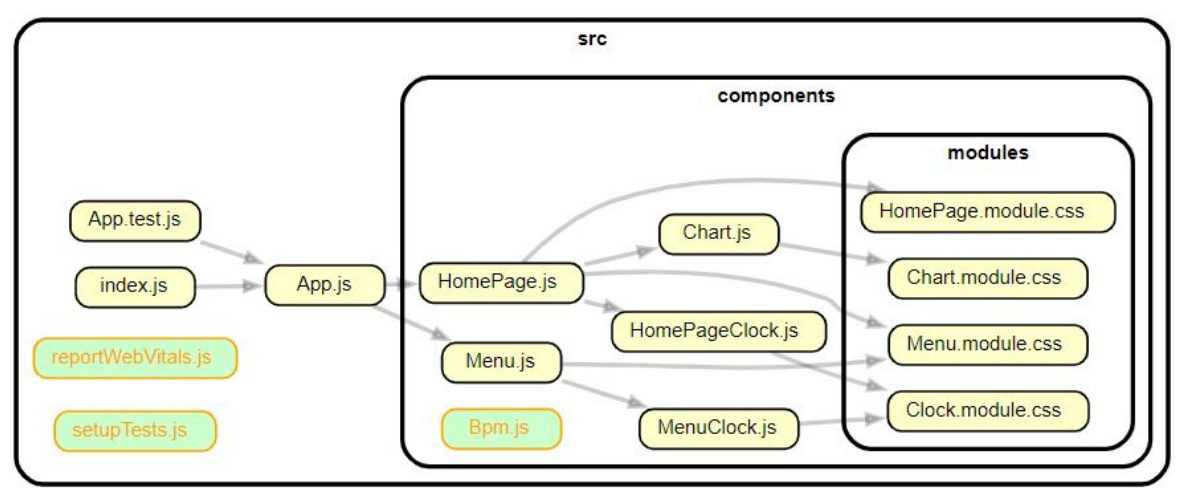
We are now able to extract all the datatypes we are going to be using

Project is now completely in reactJS

Front- and Backend are merged now

Demo

Architecture



This diagram was created with dependency cruiser in React JS

Cloud service

To make our application available for everybody we will be using Google Cloud Platform (GCP)

Reasons for GCP

- Prior knowledge
- Good service in the free version
- Unlimited free trial

Use cases

Medical use cases

- useful in clinical studies to measure certain body behaviors while a patient is watching their own data
- could be used to help diagnose heart diseases or detect suspicious behavior

Athletic / general use cases

- monitor yourself in a workout to push your own limits even further
- as a trainer you can watch your athletes body performance and work on specific routines

Surveys

In addition to our current use cases we made different public surveys for each user group

- Professional athlete/sport enthusiast
  - ➜ https://docs.google.com/forms/d/e/1FAIpQLSdkFks3VcNdwWnPLWQcLXQ-8CT01FwwmEuiq6Y7-EwNLm1MjQ/viewform?usp=sf_link
- Medical personnel
  - ➜ https://docs.google.com/forms/d/e/1FAIpQLSfiDv1USG6oDVYS209TNAdWYiQddj5bX7-gufE8D865_mBing/viewform?usp=sf_link

Goals for the next Milestone

- Deploy web-application in GCP
- Visualize ECG data in a real time graph
- Visualize PPI data
- Complete and distribute the surveys
- Finish the page for the verity sense sensor

Links

- https://docs.google.com/spreadsheets/d/11SqpF1FvS1LEMWFz0SsEXg5F3Ot5597p3i7_x48yxm0/edit#gid=0
- https://trello.com/b/6x4HYCa9/project