
EE/CprE/SE 491 WEEKLY REPORT 6

Start Date – End Date Group

number: 44

Project title: FixIt

Client &/Advisor: Berk Gulmezoglu

Team Members/Role: Benjamin Muslic, Jonathan Duron, Mohammed Elaagip, William Griner

Weekly Summary

A good amount was completed this week. We met with our advisor to check in and report our progress and he was quite pleased.

Past week accomplishments

Benjamin Muslic

- Was able to use working DTC checking code and existing hardware to send to a local host IP address.
 - Wrote code for ESP32 to connect to Wi-Fi OBD AND simultaneously emit a Wi-Fi signal for the phone to connect
 - User connects to the ESP32 Wi-Fi on their phone and typed in ELM327 IP address (in this case its 192.168.4.1)
 - Made a high-level diagram to better understand the hardware setup for the working demonstration

1:08



DTC Codes :

P0410

C0300

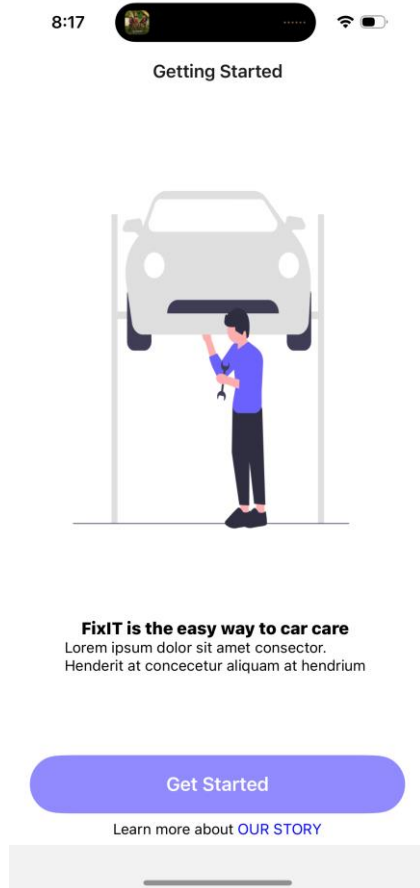


192.168.4.1



Jonathan Duron

Had a conversation with the Will and decided what we will be using for user authentication. We ultimately decided on using AWS to store users and password. Also helped Mo setup the frontend on his machine. Also created the getting started page iPhone apps.



Mohamed Elaagip

I focused on setting up my front end repo on my desktop computer which is Windows based but that ended up with running into package management issues. My task this week was mainly to make sure that the windows environment is up and running. We ended up running into lots of issues so a viable idea going forward is to dockerize the project using dev container in vscode in order to avoid this issue on any devices.

William Griner

Further researched and architected AWS infrastructure for our needs with focuses on: Security (virtual private cloud, public & private subnets, security groups, and network ACLs (if needed)), availability (mutli availability zones), scalability (auto-scaling groups), resource organization (subnets) redundancy / failover, authorization (cognito), compute needs (ec2 and lambda), and database needs (rds).

Collaborated with frontend devs on how our sign up, create account, etc. (auth in general) process will work on the frontend. Discussed what we need from one another.

Pending issues

Currently the hardware setup requires the user to connect to the ESP32 via Wi-Fi and use the ELM327 dongle IP address in the browser. However, the issue with this is that the user won't be able to access the internet since their network is currently occupied.

There was a software issue where Jon initialized the git repo incorrectly which led to confusion on why the repo was not updating.

○ Individual contributions

<u>NAME</u>	<u>Individual Contributions</u> <i>(Quick list of contributions. This should be short.)</i>	<u>Hours this week</u>	<u>HOURS cumulative</u>
Benjamn Muslic	<ul style="list-style-type: none">• Displayed DTC's on phone• Overlaid high-level plan from now on	8	49
Jonathan Duron	<ul style="list-style-type: none">• React native cli UI Development	5	35
Mohamed Elaagip	<ul style="list-style-type: none">• React/Github env native setup on Windows	7	38
William Griner	<ul style="list-style-type: none">• research security, scalability, availability, authorization, compute, and databases in AWS• implemented basic AWS infrastructure• worked with frontend devs	6	38

Plans for the upcoming week

Benjamin Muslic

- Once team is done with setting up cloud server obtain API endpoint to be able to make HTTP requests
- Use users' phone as network router (through hotspot). Instead of the user connecting to the ESP32 and compromising network access, ESP32 will utilize phones hotspot and relay the DTCs to the cloud server. In this case, the user can access the cloud and be able to have full network access.
- High level overview he plans to follow



Mohamed Elaagip:

- Collaborating with Jon to fix frontend issues
- Resolving a crashing problem that impacts Windows devices

Jonathan Duron

- Fix the git issue
- Work on backend calls for authenticating users
- Help Mo resolve the React Native crashing problem

William –

- Finalize aws architecture
- Create authentication flows for sign in, create account, etc.
- Look into the difference in value between making API calls to an LLM vs hosting our own