The scrum leader for each week was determined by a pseudorandom online selector, which explains why some people were scrum leaders more often. Since we only had a limited number of weeks, these differences in scrum leader frequency may be more pronounced.

Jan. 19th, 2021

Ihsan Olawale (Scrum Leader)	Accomplished: ● Quartus up and running, began tutorials
	Road blocks: ● Couldn't find missing VHDL file in tutorial 1.2
	Tasks for Today ● Come up with project ideas ● Go through 1.2 carefully, and ensure VHDL is chosen at appropriate stages
Andrew Chan	Accomplished: ● Read through tutorials, but didn't implement them
	Road blocks: ● Interdependencies between tutorials
	Tasks for Today ● Begin implementing tutorials in order via Quartus/Eclipse
Daniel Ng	Accomplished: ● Finished up to tutorial 1.7
	Road blocks: ● None

<table>
<tr><td></td><td>Tasks for Today
Finish tutorial 1.8 and 1.9
Come up with project ideas</td></tr>
<tr><td rowspan="3">Jason Bai</td><td>Accomplished:
Every tutorial except 1.2, 1.3, and 1.5</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks for Today
Complete tutorial 1.2/1.3/1.5</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>Accomplished:
Started the tutorials</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks for Today
Continue tutorials
Idea generation</td></tr>
</table>

Jan. 21th, 2021

Ihsan Olawale(Scrum Leader)	Accomplished: ● Tutorial 1.2 done, debugged WSL problems and improved reading comprehension
	Road blocks: ● None
	Tasks: ● Continue tutorials
Andrew Chan	Accomplished: ● Tutorial 1.2/1.3
	Road blocks: ● None
	Tasks: ● Complete tutorials by end of week ● Idea generation/selection/elaboration ● Help Jason with 1.3
Daniel Ng	Accomplished: ● Finished all tutorials
	Road blocks: ● None
	Tasks: ● Implement TA suggestions and work on proposal

Jason Bai	Accomplished: ● Finished tutorial 1.2
	Road blocks: ● Tutorial 1.3 not loading for some reason
	Tasks: ● Fix tutorial 1.3
Zane Frantzen	Accomplished: ● Tutorial 1.2 mostly done
	Road blocks: ● None
	Tasks: ● Over the weekend, finish up the tutorial

Jan. 26th, 2021

Daniel Ng (Scrum Leader)	Accomplished: ● Basically nothing
	Road blocks: ● None
	Tasks: ● Project proposal
Andrew Chan	Accomplished: ● Completed all tutorials
	Road blocks: ● None
	Tasks: ● Project proposal
Ihsan Olawale	Accomplished: ● Completed all tutorials ● Created skeletons for proposal and requirements doc
	Road blocks: ● None
	Tasks: ● Project proposal ● Divide up tasks

Jason Bai	Accomplished: ● Completed all tutorials
	Road blocks: ● None
	Tasks: ● Project proposal
Zane Frantzen	Accomplished: ● Completed all tutorials
	Road blocks: ● None
	Tasks: ● Project proposal

Jan. 28th, 2021

Daniel Ng (Scrum Leader)	Accomplished: ● Research some encryption algorithms
	Road blocks: ● None
	Tasks: ● Refine project proposal ● Draw UML diagram for encryption algorithm ● Investigate how to generate random numbers in DE1 using verilog
Andrew Chan	Accomplished: ● Worked on drawing hardware diagram ● Looked at RFS documentation
	Road blocks: ● None
	Tasks: ● Project proposal ● Look more into RFS documentation
Ihsan Olawale	Accomplished: ● Wrote software documentation and graphics design
	Road blocks: ● None

<table>
<tr><td></td><td>Tasks:
Differentiate the two designs (software aspect)</td></tr>
<tr><td rowspan="3">Jason Bai</td><td>Accomplished:
Worked on drawing hardware diagram
Looked at RFS documentation</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Project proposal
Look more into RFS documentation</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>Accomplished:
Market and requirements document
Created mocks for the UI
Wrote major data structures
Database</td></tr>
<tr><td>Road blocks:
Not entirely sure what data structures entails</td></tr>
<tr><td>Tasks:
Refine data structures part of project proposal</td></tr>
</table>

Feb. 2nd, 2021

Jason Bai (Scrum Leader)	Accomplished: ● Worked on hardware part of proposal ● Started looking at RFS documentation
	Road blocks: ● n/a
	Tasks: ● Finalize conclusion of proposal, handin deliverables due on Feb 3 ● Make slides for presentation (on Feb 9)
Andrew Chan	Accomplished: ● Worked on hardware proposal w/ Jason ● Worked on reading RFS documentation and manual
	Road blocks: ● n/a
	Tasks: ● Finalize conclusion of proposal, handin deliverables due on Feb 3 ● Make slides for presentation (on Feb 9)
Ihsan Olawale	Accomplished: ● Software functionality of proposal

	Road blocks: ● n/a
	Tasks: ● Finalize conclusion of proposal, handin deliverables due on Feb 3 ● Make slides for presentation (on Feb 9)
Daniel Ng	Accomplished: ● Algorithms part of proposal ● Comparisons between algorithms in conclusion of proposal
	Road blocks: ● n/a
	Tasks: ● Finalize conclusion of proposal, handin deliverables due on Feb 3 ● Make slides for presentation (on Feb 9)
Zane Frantzen	Accomplished: ● Did own sections, sequence diagrams on proposal ● Formatted proposal document
	Road blocks: ● n/a
	Tasks: ● Finalize conclusion of proposal, handin deliverables due on Feb 3

	• Make slides for presentation (on Feb 9)

Feb. 4th, 2021

Jason Bai (Scrum Leader)	Accomplished: ● Finished and submitted proposal, finished slides
	Road blocks: ● n/a
	Tasks: ● Make script ● Presentation at 1:30 PM on Tuesday Feb 9 ○ https://ubc.zoom.us/j/61888564652?pwd=b2thanJ2NlV0OXdFN3dqQi9NMU1IUT09 ○ Meeting ID: 618 8856 4652 ○ Passcode: 278604
Andrew Chan	Accomplished: ● Finished and submitted proposal, finished slides
	Road blocks: ● n/a
	Tasks: ● Make script
Ihsan Olawale	Accomplished: ● Finished and submitted proposal, finished slides ● Assigned more tasks on github repo

	Road blocks: ● n/a
	Tasks: ● Write presentation script
Daniel Ng	Accomplished: ● Finished and submitted proposal, finished slides
	Road blocks: ● n/a
	Tasks: ● Write presentation script
Zane Frantzen	Accomplished: ● Finished and submitted proposal, finished slides ● Uploaded logo to organization's avatar on github
	Road blocks: ● n/a
	Tasks: ● Write presentation script

Feb 9th 2021

<table>
<tr><td rowspan="3">Andrew Chan (Scrum Leader)</td><td>Accomplished:
Attended presentation</td></tr>
<tr><td>Road blocks:
n/a</td></tr>
<tr><td>Tasks:
Doing more planning
Flesh out what we need and how to connect them/configure them
Going through tutorials
Break down milestone tasks and add to issues/trello</td></tr>
<tr><td rowspan="3">Jason Bai</td><td>Accomplished:
Attended presentation (and presented aesthetics of mockup)</td></tr>
<tr><td>Road blocks:
n/a</td></tr>
<tr><td>Tasks:
Doing more planning
Flesh out what we need and how to connect them/configure them
Going through tutorials
Break down milestone tasks and add to issues/trello</td></tr>
<tr><td>Ihsan Olawale</td><td>Accomplished:
Attended presentation (and presented 5 layers)</td></tr>
</table>

<table>
<tr><td rowspan="3"></td><td>Road blocks:
n/a</td></tr>
<tr><td>Tasks:
APIs planning and documentation
Hosting
Standalone?
Investigate Postgres
Break down milestone tasks and add to issues/trello</td></tr>
<tr><td rowspan="3">Daniel Ng</td><td>Accomplished:
Attended presentation (answered questions about AES)</td></tr>
<tr><td>Road blocks:
n/a</td></tr>
<tr><td>Tasks:
Write AES verilog
Break down milestone tasks and add to issues/trello</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>Accomplished:
Attended presentation (and spoke)</td></tr>
<tr><td>Road blocks:
n/a</td></tr>
<tr><td>Tasks:
Finish UI view in figma
Break down milestone tasks and add to issues/trello</td></tr>
</table>

Feb 11th 2021

Andrew Chan (Scrum Leader)	Accomplished: ● Added github issues
	Road blocks: ● n/a
	Tasks: ● Doing more planning ○ Flesh out what we need and how to connect them/configure them ● Going through tutorials ● Break down milestone tasks and add to issues/trello
Jason Bai	Accomplished: ● Added github issues
	Road blocks: ● n/a
	Tasks: ● Doing more planning ○ Flesh out what we need and how to connect them/configure them ● Going through tutorials ● Break down milestone tasks and add to issues/trello
Ihsan Olawale	Accomplished: ● Added github issues

<table>
<tr><td></td><td>Road blocks:
Other work</td></tr>
<tr><td></td><td>Tasks:
APIs planning and documentation
Hosting
Standalone?
Investigate Postgres
Break down milestone tasks and add to issues/trello</td></tr>
<tr><td rowspan="3">Daniel Ng</td><td>Accomplished:
Started Python for AES
For verification and reference</td></tr>
<tr><td>Road blocks:
n/a</td></tr>
<tr><td>Tasks:
Write AES verilog
Break down milestone tasks and add to issues/trello</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>Accomplished:
Finished UI mockup</td></tr>
<tr><td>Road blocks:
n/a</td></tr>
<tr><td>Tasks:
Finish UI view in figma
Break down milestone tasks and add to issues/trello</td></tr>
</table>

Feb 16th 2021

<table>
<tr><td rowspan="3">Daniel Ng</td><td>Accomplished:
Wrote a bit more for the software implementation and pushed</td></tr>
<tr><td>Road blocks:
Other work</td></tr>
<tr><td>Tasks:
Do a lot more for AES Verilog implementation</td></tr>
<tr><td rowspan="3">Andrew Chan</td><td>Accomplished:
Started looking through RFS Manual</td></tr>
<tr><td>Road blocks:
Other work</td></tr>
<tr><td>Tasks:
Doing more planning
Flesh out what we need and how to connect them/configure them
Going through tutorials
Break down milestone tasks and add to issues/trello</td></tr>
<tr><td rowspan="2">Jason Bai</td><td>Accomplished:
Started looking through RFS Manual</td></tr>
<tr><td>Road blocks:
Other work</td></tr>
</table>

<table>
<tr><td></td><td>Tasks:
Doing more planning
Flesh out what we need and how to connect them/configure them
Going through tutorials
Break down milestone tasks and add to issues/trello</td></tr>
<tr><td rowspan="3">Ihsan Olawale</td><td>Accomplished:
Look at AWS, serverless
20,000 requests per day
Pushed skeleton server code</td></tr>
<tr><td>Road blocks:
Other work</td></tr>
<tr><td>Tasks:
Look into AWS more and figure out how to exactly setup
Get testing and continuous deployment up</td></tr>
<tr><td rowspan="3">Zane Frantzen (Scrum Leader)</td><td>Accomplished:
Finished UI views in Figma
Generated list of tasks going forward</td></tr>
<tr><td>Road blocks:
Other work</td></tr>
<tr><td>Tasks:
Finish adding tasks to GitHub from generated list
Get some skeleton code going</td></tr>
</table>

Feb 18th 2021

Daniel Ng	Accomplished: ● None
	Road blocks: ● None
	Tasks: ● AES software implementation ● Start getting Verilog AES implementation going
Andrew Chan	Accomplished: ● Attempted module 2 tutorials
	Road blocks: ● none
	Tasks: ● Write QSYS
Jason Bai	Accomplished: ● Attempted module 2 tutorials
	Road blocks: ● none
	Tasks: ● Write QSYS

Ihsan Olawale	Accomplished: ● Skeleton Express app running, found some frameworks ● AWS account created
	Road blocks: ● Other work
	Tasks: ● Read through more documentation ● Set-up CI/CD pipeline (deployment and tests)
Zane Frantzen (Scrum Leader)	Accomplished: ● React Native boilerplate code running
	Road blocks: ● Other work
	Tasks: ● Have the first few static views running on the emulator

Feb 23rd 2021

Jason Bai	Accomplished: ● Created QSYS component list
	Road blocks: ● none
	Tasks: ● Module 2 Assessment ○ Bluetooth Communication Protocols ● Continue figuring out how to actually use RFS stuff
Andrew Chan (Scrum Leader)	Accomplished: ● Created QSYS component list
	Road blocks: ● none
	Tasks: ● Module 2 Assessment ○ Bluetooth Communication Protocols ● Continue figuring out how to actually use RFS stuff
Daniel Ng	Accomplished: ● Finished software implementation ● Can be used for verification ● Started verilog implementation

	Road blocks: ● Other work
	Tasks: ● Module 2 Assessment ● Continue Verilog AES implementation
Ihsan Olawale	Accomplished: ● None
	Road blocks: ● Configuration issues
	Tasks: ● Module 2 Assessment ● Read through more documentation ● Set-up CI/CD pipeline (deployment and tests)
Zane Frantzen	Accomplished: ● Login screen runs on emulator ● Finished configuring boilerplate code ● How to communicate over Bluetooth
	Road blocks: ● None
	Tasks: ● Module 2 Assessment ● Finish Dashboard-type view ● Getting data passed around app via Redux

Feb 25th 2021

<table>
<tr><td rowspan="3">Jason Bai</td><td>Accomplished:
Most of tutorial 1.3 done
Mostly figured out where the actual GPIO pins are</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Module 2 Assessment
Sign up
Check requirements when out
Continue figuring out RFS stuff</td></tr>
<tr><td rowspan="3">Andrew Chan (Scrum Leader)</td><td>Accomplished:
Most of tutorial 1.3 done
Mostly figured out where the actual GPIO pins are</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Module 2 Assessment
Sign up
Check requirements when out
Continue figuring out RFS stuff</td></tr>
<tr><td>Daniel Ng</td><td>Accomplished:
None</td></tr>
</table>

<table>
<tr><td rowspan="3"></td><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Module 2 Assessment
Sign up
Check requirements when out
Continue Verilog AES implementation</td></tr>
<tr><td rowspan="3">Ihsan Olawale</td><td>Accomplished:
None</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Module 2 Assessment
Sign up
Check requirements when out
Read through more documentation
Set-up CI/CD pipeline (deployment and tests)</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>Accomplished:
Finished login view
Figured out redux stuff
Login to main screen is viewable</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Module 2 Assessment
Sign up
Check requirements when out
Finish Dashboard view</td></tr>
</table>

	● Start working on upload/download pop-ups

Mar 02th 2021

Jason Bai	Accomplished: ● Started slides/report ● Got responses from Terasic(change pins and clk source)
	Road blocks: ● 2 midterms today
	Tasks: ● Finish module 2 report and slides ○ Present with Andrew ● Continue figuring out RFS stuff
Andrew Chan	Accomplished: ● Started slides/report ● I tried to make the tutorial run
	Road blocks: ● Exams
	Tasks: ● Module 2 Assessment ○ Slides in anticipation we get something work ● Continue figuring out RFS stuff
Daniel Ng	Accomplished: ● AES Verilog encrypt and decrypt modules ● Deployed the serverless app on the backend ● Filled out design change to encryption key of 128 bits from 256 bits

	• Task distribution changes
	Road blocks: • AWS learning
	Tasks: • Module 2 assessment ○ Report and slide set • Get AWS RDS setup • Probably CI as well
Ihsan Olawale (Scrum Leader)	Accomplished: • Verified that Daniel successfully deployed to AWs
	Road blocks: • Other work
	Tasks: • Module 2 Assessment ○ Might need to look at diagrams and slide sets • Get AWS RDS setup • Setup CI
Zane Frantzen	Accomplished: • Finished all of dashboard view ○ Upload files and download files • Settings view • Report for tomorrow • Protocol specifications for Bluetooth and APIs
	Road blocks: • None

	Tasks: ● Continue finishing the final static views ● Device configuration views ○ Passwords, wifi settings

Mar 04th 2021

Jason Bai	Accomplished: ● Slides and report
	Road blocks: ● None
	Tasks: ● Continue figuring out RFS stuff ● Write C code for exercise
Andrew Chan	Accomplished: ● Slides and report
	Road blocks: ● None
	Tasks: ● Continue figuring out RFS stuff ● Write C code for exercise
Daniel Ng	Accomplished: ● Design change and report ● Planned out system modules ● Sent info about AWS RDS for Ihsan
	Road blocks: ● None
	Tasks: ● Set up CI

<table>
<tr><td></td><td>

- Small unit tests for AWS lambda functions

</td></tr>
<tr><td rowspan="3">Ihsan Olawale (Scrum Leader)</td><td>

Accomplished:

- Began looking at AWS RDS
- Looking at CRUD APIs

</td></tr>
<tr><td>

Road blocks:

- Couldn’t find the configuration for AWS RDS

</td></tr>
<tr><td>

Tasks:

- Continue figuring out AWS RDS
- CRUD APIs

</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>

Accomplished:

- Planned out system modules
- Completing more static views

</td></tr>
<tr><td>

Road blocks:

- n/a

</td></tr>
<tr><td>

Tasks:

- 3 static views left

</td></tr>
</table>

Mar 11th 2021

Jason Bai	Accomplished: ● Further deepened understanding of how to build upon exercises
	Road blocks: ● None
	Tasks: ● Testing the serial port (and how to test it)
Andrew Chan	Accomplished: ● Continued work on testbench
	Road blocks: ● None
	Tasks: ● Try out our own endpoint to identify if messages are actually being sent by RFS card ● Look at TX/RX pins through wiretap at the same time to see what messages are being sent ● Check if everything matches testbench and if it is even correct
Daniel Ng (Scrum Leader)	Accomplished: ● Looked into authentication session vs JWTs

<table>
<tr><td rowspan="3"></td><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Register and login endpoints
Synthesize AES Verilog modules and test them</td></tr>
<tr><td rowspan="3">Ihsan Olawale</td></tr>
<tr><td>Accomplished:
Debugged some backend issues</td></tr>
<tr><td>Road blocks:
Other work</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>Tasks:
Learn about how best to interface with postgres
Try to implement some simple queries</td></tr>
<tr><td>Accomplished:
Added remaining GitHub issues
Added file selector to the upload view</td></tr>
<tr><td>Road blocks:
Nope</td></tr>
<tr><td>Tasks:
Move remaining logic to services (refactor time)
Start the upload progress popup sheet</td></tr>
</table>

Mar 16th 2021

Jason Bai	Accomplished: ● Directly connect to serial ports ● DE1 firmware fully functional ● Fixed clock issue
	Road blocks: ● Not really
	Tasks: ● Connect computer to RFS ● See how AT commands work
Andrew Chan	Accomplished: ● Checked if testbenches were working correctly ● Tried calling endpoints from Terasic and our server
	Road blocks: ● No response, server didn't detect request either
	Tasks: ● Use switches and 7 seg display to better understand signals ● Investigate Google WiFi location API ● Look into sensors (gyroscope/accelerometer) to generate keys
Daniel Ng (Scrum Leader)	Accomplished: ● Implemented most of the backend server

<table>
<tr><td rowspan="3"></td><td>

- All user endpoints done
  - Using sessions with cookies
- Deployed to heroku with docker

</td></tr>
<tr><td>

Road blocks:

- Nope

</td></tr>
<tr><td>

Tasks:

- Add remaining time to wait for login error message
- Write some unit tests
- Refactor to depend less on express
  - Separate services and controllers
  - Services handle the business logic and returns result / error
  - Controller catches errors and format a message for that error
- Synthesize AES Verilog modules and test them

</td></tr>
<tr><td rowspan="3">Ihsan Olawale</td><td>

Accomplished:

- Discussed with Andrew to see how firmware team is doing
- Offered potentially helpful suggestions

</td></tr>
<tr><td>

Road blocks:

- Other work

</td></tr>
<tr><td>

Tasks:

- Port serverless code to new server
- Do CRUD for files

</td></tr>
<tr><td>Zane Frantzen</td><td>

Accomplished:

- Finished all UI components
  - Fun loading screens

</td></tr>
</table>

	● Refactored code so all logic is written as services ● Frontend looks good, logic is cool
	Road blocks: ● None
	Tasks: ● Update fonts to make them look aesthetic (not Comic sans) ● Integrate with backend

Mar 18th 2021

<table>
<tr><td rowspan="3">Jason Bai</td><td>Accomplished:
Connected DE1 to RFS
Connected RFS to phone!!!!
Used SPP protocol</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Start writing firmware for data transmission between RFS and phone
Upload packet
Download packet
Research on using WiFi</td></tr>
<tr><td rowspan="3">Andrew Chan</td><td>Accomplished:
Investigated Google WiFi API
Very possible to do
May require rounding down to less precision
Sensors use I2C protocol</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Look into RFS systems CD tutorial for sensors
Learn how to communicate between ARM and NIOS</td></tr>
<tr><td>Daniel Ng</td><td>Accomplished:
Refactored the server code</td></tr>
</table>

<table>
<tr><td rowspan="3"></td><td>

- Redeployed to heroku

</td></tr>
<tr><td>

Road blocks:

- None

</td></tr>
<tr><td>

Tasks:

- Integration test with supertest
- Write some unit tests
- Enable https

</td></tr>
<tr><td rowspan="3">Ihsan Olawale</td><td>

Accomplished:

- Noticed and investigated refactor of server code yesterday

</td></tr>
<tr><td>

Road blocks:

- Other work

</td></tr>
<tr><td>

Tasks:

- Port serverless code to new server
- Do CRUD for files
  - GET File metadata
    - FileId(Autogenerated)
    - Name
    - CreatedAt(autogenerated)
    - UpdatedAt(autogenerated)
  - POST new file
- Finish main operations by next Sunday (not including testing)

</td></tr>
<tr><td>Zane Frantzen (Scrum Leader)</td><td>

Accomplished:

- Updating fonts to **NOT** Comic Sans
- Integrated with server login and register
- Refactored logic so app is more efficient and better structured
- Frontend more aesthetic than ever before

</td></tr>
</table>

	Road blocks: ● None
	Tasks: ● Integrate with logout endpoint ● Look into Android bluetooth communication ● More refactoring

Mar 23rd 2021

Jason Bai	Accomplished: ● RFS actually using wifi
	Road blocks: ● Other work
	Tasks: ● Establish how bluetooth/wifi work ● Get backend heroku link/additional details
Andrew Chan	Accomplished: ● Modified Quartus files for RFS Sensor to apply to DE1 ● Compiled ● Reviewed C files
	Road blocks: ● Nios issue (may need to pay)
	Tasks: ● Receive tasks from Jason
Daniel Ng	Accomplished: ● Proper usage of dependency injection to optimize unit testing ○ Finished unit tests, 100% coverage ● Discussed with Ihsan on file database structure

<table>
<tr><td rowspan="2"></td><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Synthesize AES Verilog modules
To run on soft processor
Integration tests for backend (for later)
Reuse hex display verilog display
Hardware accelerated random generator (possibly by xoring the three 50 MHz clock signals)</td></tr>
<tr><td rowspan="3">Ihsan Olawale (Scrum Leader)</td><td>Accomplished:
Began writing service/controller for file entity
Received clarification on how blobs work</td></tr>
<tr><td>Road blocks:
Other work</td></tr>
<tr><td>Tasks:
Do CRUD for files
When done with backend consider helping firmware team</td></tr>
<tr><td rowspan="2">Zane Frantzen</td><td>Accomplished:
Integrate with logout endpoint
Improve security
Logout users with expired tokens
Good first step for security
Work on bluetooth commenced</td></tr>
<tr><td>Road blocks:
None</td></tr>
</table>

	Tasks: ● Integrate with backend/bluetooth ● Improved UX

Mar. 25th, 2021

Jason Bai	Accomplished: ● Planning for tasks
	Road blocks: ● None
	Tasks: ● See Tuesday's tasks
Andrew Chan	Accomplished: ● Looked for I2C code ○ Found terasic code from 2007 applicable to de1 with minimal differences
	Road blocks: ● None
	Tasks: ● See Tuesday's tasks ● Help others, integrate Daniel's AES QSYS system and CPEN391Computer from UART
Daniel Ng	Accomplished: ● Dockerized Postgres and Redis because of compatibility and localized issues
	Road blocks: ● None

<table>
<tr><td></td><td>Tasks:
Synthesize AES Verilog modules
Then, ARM controller
Randomly generated hex display</td></tr>
<tr><td rowspan="3">Ihsan Olawale (Scrum Leader)</td><td>Accomplished:
Nearly done file endpoints</td></tr>
<tr><td>Road blocks:
Other assignments</td></tr>
<tr><td>Tasks:
Relate User entities to File entities
If done early, do firmware as applicable</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>Accomplished:
Finished bluetooth integration from frontend side
Only two lines of code could be wrong
Refactored yet again
Throw errors instead of strange true/false tuple
117 JavaScript files
A lot of testing</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Integrate with backend, specifically file things
Authentication token refresh while uploading/downloading</td></tr>
</table>

Mar. 30th, 2021

Jason Bai	Accomplished: ● Send strings from DE1 to app successfully
	Road blocks: ● None
	Tasks: ● Bluetooth parser (controller code)
Andrew Chan (Scrum Leader)	Accomplished: ● RFS orientation working with Verilog files
	Road blocks: ● Using verilog files for orientation is not ideal
	Tasks: ● Find out whether sensor data can be gotten purely from ARM ● If not, do memory mapped avalon interface on QSYS
Daniel Ng	Accomplished: ● Successfully starting hardware accelerated module from ARM C code
	Road blocks: ● None

<table>
<tr><td></td><td>Tasks:
Randomly generated hex display</td></tr>
<tr><td rowspan="3">Ihsan Olawale</td><td>Accomplished:
Looked at JSON parser github</td></tr>
<tr><td>Road blocks:
Development tools not set up</td></tr>
<tr><td>Tasks:
Make sure development tools are set up
Re-install DS5
Integrate JSON parser to ARM C code
Call server endpoints</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>Accomplished:
UI snapshot testing
Written 60% of mock server services tests</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Finish up testing
Implemented CI</td></tr>
</table>

April 1st, 2021

Jason Bai	Accomplished: ● Finished part of main controller code and did basic bluetooth mocking
	Road blocks: ● None
	Tasks: ● Make it unnecessary to use jumper wire
Andrew Chan (Scrum Leader)	Accomplished: ● Found example of I2C from prof
	Road blocks: ● Tried something that didn't work ● Understanding example and applying to RFS
	Tasks: ● Run code given by prof ● Understand how to use I2C for RFS orientation sensor ● Get working C code ASAP
Daniel Ng	Accomplished: ● Got working code for starting AES encryption/decryption ● Random HEX display ● Did part of the key generation algorithm

<table>
<tr><td rowspan="2"></td><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Finish backend integration and unit testing</td></tr>
<tr><td rowspan="3">Ihsan Olawale</td><td>Accomplished:
Wrote JSON parser function</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Make sure development tools are set up
Re-install DS5
Test JSON parser works
Integrate JSON parser to ARM C code
Call server endpoints</td></tr>
<tr><td rowspan="2">Zane Frantzen</td><td>Accomplished:
Beautiful UML diagram
Implemented all unit tests
Done 1 integration tests
File retrieval from local filesystem
Implemented minimum password length for DE1 master password
Fixed some bugs from testing</td></tr>
<tr><td>Road blocks:
None</td></tr>
</table>

	Tasks: ● Get HPS code running on DE1 and do entire integration flow of communicating through bluetooth

April 4th, 2021

<table>
<tr><td rowspan="3">Jason Bai (Scrum Leader)</td><td>Accomplished:
After research, I have concluded that using non-volatile memory is not feasible
SD card, too much work
Flash: Not available on our DE1</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Flash: https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/ug/ug-gen-sfi.pdf
Help others with remaining tasks
Final report</td></tr>
<tr><td rowspan="3">Andrew Chan</td><td>Accomplished:
Marginally understood some concepts about I2C with RFS sensors</td></tr>
<tr><td>Road blocks:
Failing to understand the examples given</td></tr>
<tr><td>Tasks:
Password function in firmware
Identify files that need refactoring</td></tr>
<tr><td>Daniel Ng</td><td>Accomplished:
Did given tasks</td></tr>
</table>

	• Finished backend unit and integration testing, backend is 100% tested • Integrated AES code into main qsys file, tested and works • Added 3 C files to source
	Road blocks: • None
	Tasks: • Start report writing/ final module assessment stuff
Ihsan Olawale	Accomplished: • Installed DS5, didn't work normally, had to add to path
	Road blocks: • none
	Tasks: • Look through tutorials again for how to add existing files to DS5 project ○ Or just create new files and paste code in • Midday by tomorrow: something usable for Wi-fi • Test JSON parser works • Integrate JSON parser to ARM C code • Call server endpoints
Zane Frantzen	Accomplished: • Installing software to run firmware on actual hardware
	Road blocks: • None

	Tasks: ● Run app on phone ● Load firmware onto DE1/rfs ● Test out integration

April 6th, 2021

Jason Bai (Scrum Leader)	Accomplished: ● Worked on report, wrote firmware stuff ● Researched RFS sensor stuff
	Road blocks: ● None
	Tasks: ● Continue sensor research ● Help finish report
Andrew Chan	Accomplished: ● Wrote verification service for master password
	Road blocks: ● None
	Tasks: ● Help finish final report ● Refactor code to match the high level firmware structure diagram
Daniel Ng	Accomplished: ● Server and hardware acceleration part of report ● Filled out front part of report (copy and modify stuff from module 1 proposal) ● Code documentation for backend ● Add instructions for how to run backend locally

<table>
<tr><td></td><td>Road blocks:
None</td></tr>
<tr><td></td><td>Tasks:
Finish up server README
Do individual appendix
Help finish report</td></tr>
<tr><td rowspan="3">Ihsan Olawale</td><td>Accomplished:
Got DS5 working and completed JSON parser</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Integrate JSON parser with wi-fi code and everything else
Figure out how to parse response from server
What HTTP, AT commands to use
Help finish report</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>Accomplished:
Installed all software needed to run everything
Got app running on real phone, and actually connected to firmware running on DE1</td></tr>
<tr><td>Road blocks:
Firmware only receiving 16 bytes right now</td></tr>
<tr><td></td></tr>
</table>

	Tasks: ● Figure out 16 byte limit, may have to adjust communication protocol to make it work ● Update set password view ● Help finish report

April 8th, 2021

Jason Bai (Scrum Leader)	Accomplished: ● Mostly wrote out driver code for sensors
	Road blocks: ● None
	Tasks: ● Debug sensor code ● Report: individual appendix
Andrew Chan	Accomplished: ● Moved all memory addresses to a single C file for organization ● Started refactoring function names ● Wi-fi: worked with Bob, had DE1 issues
	Road blocks: ● None
	Tasks: ● Continue working with Bob on wifi ● pause refactoring for now ● Help finish report
Daniel Ng	Accomplished: ● Finished server README ● Started writing remaining functions for firmware (that call already written functions) ● Finishing main controller code

<table>
<tr><td rowspan="3"></td><td>Road blocks:
Waiting for others' work to be finished</td></tr>
<tr><td>Tasks:
Continue integrating firmware code
Individual appendix</td></tr>
<tr><td rowspan="3">Ihsan Olawale</td><td>Accomplished:
Worked on Wi-fi
Worked on report
Added JSON parser stuff to firmware part
Covered on AT commands</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Continue working on Wi-fi
Then add wi-fi report
Individual appendix</td></tr>
<tr><td rowspan="3">Zane Frantzen</td><td>Accomplished:
Implemented fragmented bluetooth sending from phone to DE1
Wrote skeleton controller code
Wrote JSON parser helper functions
Improved README of app
App debugging and UI improvements</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Finish multi fragment message sending on firmware</td></tr>
</table>

	● Change app to send network information to DE1 ● Individual appendix ● Help finish report

April 11th, 2021

<table>
<tr><td rowspan="3">Jason Bai</td><td>Accomplished:
Finished orientation sensor data
Can be integrated to firmware controller code
Wrote individual appendix</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Finish committing sensor data
Write sensor testing code
Update relevant sections of report</td></tr>
<tr><td rowspan="3">Andrew Chan</td><td>Accomplished:
Worked to solve WiFi issues
Used wireshark to identify request/response to server from RFS WiFi chip</td></tr>
<tr><td>Road blocks:
Cannot figure out which QSYS components to remove, as removing some of them makes the .sof file not work</td></tr>
<tr><td>Tasks:
Cleaning up quartus file
Add connection to reset WiFi chip
Write integration tests (different message types)</td></tr>
</table>

<table>
<tr><td rowspan="3">Daniel Ng (Scrum Leader)</td><td>Accomplished:
Finished basically all firmware controller code
Integrated phone location
Identified WiFi chip bug of 16 bytes UART FIFO and fixed it</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Finish integrating Jason’s sensor code
Fix all other integration bugs
Send response to phone with carriage return
Individual appendix</td></tr>
<tr><td rowspan="3">Ihsan Olawale</td><td>Accomplished:
Finished WiFi code (GET and POST requests)</td></tr>
<tr><td>Road blocks:
None</td></tr>
<tr><td>Tasks:
Refactor the WiFi code to look better
WiFi mocking for integration tests</td></tr>
<tr><td>Zane Frantzen</td><td>Accomplished:
Rewrote bluetooth code
Removed 16 byte limit fragments
Great performance gain
Changed some controller code
Fixed some bugs on the frontend app</td></tr>
</table>

	• Added get location services to phone and sending to DE1 • Improved frontend testing
	Road blocks: • None
	Tasks: • Fix file encoding bug (potentially) • Individual appendix • Help finish report