Executive Summary – Kyle Tolliver

Contributions

SoftConsole

- Developed and Implemented CPU Benchmarks
  - Based on risc-v's dhrystone benchmarks
    - Found at https://github.com/riscv/riscv-tests/tree/master/benchmarks/dhrystone
- Checked and improved the communication from last semester's code
  - I2C
  - SPI

Testing

- Created Arduino communication tests – Found at https://github.com/ECEN499-NASA/Arduino
  - I2C
  - SPI
  - UART
- Lead the team in working on SoftConsole peripheral tests

Documentation

- Executive Summary
- Website
  - One spot to host our documentation, code and design
  - Link is https://ecen499-nasa.github.io/

Future Suggestions

The first suggestions I would give is it's hard to do a group project of this intensity remotely. We first had to move tasks around due to not having access to the Lab Desktop. Then I didn't have remote access, which made things take longer. Also, a project like this need check-ins with the team which takes a lot of difficult scheduling to coordinate meetings.

Another suggestion is the sponsor should improve on their contribution. Our team never heard from the sponsor, we reached out to NASA a couple times throughout the semester and no response. I feel that the we weren't guided to know what is left and what needed to be done. We had to go through all the documentation for last semester to just get some idea of how to start, as time went on, we understood more. I like how Zac stepped up and helped where was needed. Next time there is a project carryover to another semester a past member should at least be a line of communication and help for the project.

Timetable

Week	Time	Work Done
Week 1	10	• Leadership • Mission Statement • Schedule
Week 2	13	• Leadership • WIGS/Meeting • Review Last Semester Work • Setup and Test VPN and Remote Desktop • Arduino Communication Test • Learned Libero and VHDL
Week 3	13	• Leadership • WIGS/Meeting • Review Last Semester Work • Arduino Communication Test • Learned Libero and VHDL
Week 4	11	• Leadership • WIGS/Meeting • Github • Setup desktop to code Libero
Week 5 – 6	16	• Leadership • WIGS/Meeting • Libero and Softconsole • Arduino Communication Test
Week 7	9.5	• Leadership • WIGS/Meeting • Libero and Softconsole • Arduino Communication Test
Week 8	13	• Leadership • WIGS/Meeting • Arduino Communication Test
Week 9	18.5	• Leadership • WIGS/Meeting • Libero and Softconsole • Arduino Communication Test • Webpage
Week 10	17.75	• Leadership • WIGS/Meeting • Libero and Softconsole • Arduino Communication Test • Webpage
Week 11	11.3	• Leadership

		• WIGS/Meeting • Webpage • CPU Benchmarks
Week 12	10.5	• Leadership • WIGS/Meeting • Webpage • CPU Benchmarks
Week 13	15.75	• WIGS/Meeting • Webpage • Executive Summary • Presentation
Total	162/161	