Contributions

FPGA Design
- Libero Troubleshooting
- Implementing base RISC-V design
- Researched documentation for implementing RISC-V cores
- Researched drivers to properly iterate on provided code
- Wrote C code to initialize and test I2C communication

PCB Design
- Researched sensors to include on PCB in order to test FPGA performance
- Designed schematics to incorporate I2C communication with sensors
- Imported and create footprints and CAD models
- Set up version control for managing PCB design among several team members
- Created table documenting FPGA pin mapping to PCB pins
- Edited entire project schematics to create consistency between team members' work
- Verified BOM and purchase components

Final Report
- Executive Summary
- documentation for I2C implementation
- documentation to assist future teams troubleshoot errors
- additional documentation for C code
- Worked on final presentation

Future Suggestions

The next group to work on this project should focus on getting familiar with the software tools as quickly as possible so that they will better understand how to move forward without getting suddenly stuck when they encounter an error.

We have described in other documents how to get up and running with the software and how to solve some common errors that we had, so I would suggest reading those and also contacting us when the future group has any questions.

Time Table

Week #	Hours spent	Work done
1	9	Mission Statement / Project objective Begin learning VHDL
2	10	Team Meetings/project planning
3	13	Team Meetings/project planning Research potential sensors
4	11	Work on implementing I2C in VHDL / Learn VHDL Research different heartrate sensor and pressure sensors to use Setting up Altium version control
5	8	Work on implementing I2C in VHDL / continue Learning VHDL Sensors into Altium for PCB Research Pulse Sensor
6	13	Design Pressure sensor and heartrate sensor schematics in Altium Manage version control
7	12	Schematic Design
8	13	Libero Tutorial Project / assisting troubleshooting Altium PCB
9	7	Help Implement TMR Troubleshoot Libero
10	20	Implement I2C module into Libero project
11	11	Order Board/Parts Help with RISCV Configurations Built arduino test for i2c
12	7	Updated BOM with correct part info Ordered/ received parts
13	25	Final Report Documentation Project Documentation for continuing work Clean up project files Team meetings
Total Hours:	159	