Johns Hopkins University

Project 2

Serial Transmit of Temperature

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# Derived Requirements

The following requirements were derived from the Project 2 Serial Transmit of Temperature document:

* The system shall capture the temperature at a periodic rate of 10 seconds.
* The system shall convert the temperature to Fahrenheit and persist the data so that it can be read at a later time.
* The system shall persist at least 10 minutes worth of temperature recordings.
* The system shall transmit the recorded time and temperature across Serial (USB) to a host machine.
* The system shall transmit the recoded time and temperature as comma separated values.

# Hardware Design

The following diagram is a schematic of the circuit connected to an Arduino Uno (rev. 3) that will capture temperature data from a sensor:

# Board Layout

The following picture showcases how the hardware design was implemented using an Arduino Uno (rev. 3) and breadboard:

# Software Design

The following diagram is a sequence diagram of the program that reads, stores, and transmits the temperature data:

# Video Demonstration

A video demonstration of the software and Arduino running can be found at the following link: