

Remote Sensor Network for Solar Power Monitoring

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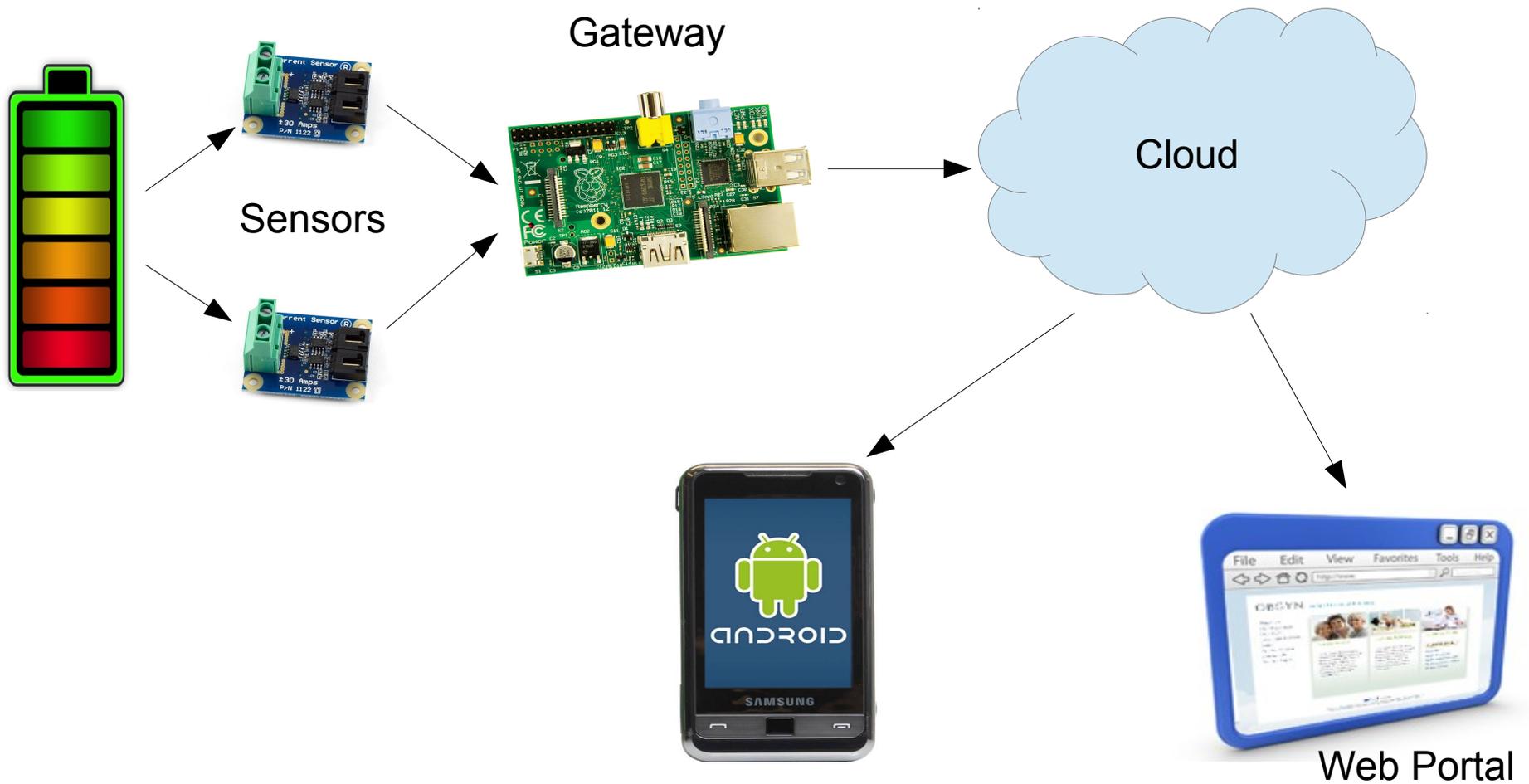
Research type: Intelligent Systems and
Advanced Telecommunication



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A quick recap...



User Interface (UIS)

- Web Portal

www.cs.uwc.ac.za/~zerasmus/login.php

A screenshot of a web login portal. It features a light gray background with a white border. On the left side, the text "Login ID" is positioned above a white rectangular input field. Below this, the text "Password" is positioned above another white rectangular input field. At the bottom center, there is a green rectangular button with the word "Login" written in white text.

- Android App



Web Portal - login

Login to Remote Monitoring System



Username:

Password:

Login



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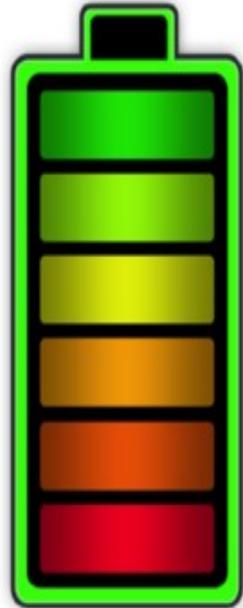
Web Portal - Readings

Battery and Environmental Readings

Date/Time	Ambient Temperature	Relative Humidity	Luminosity	DC Volt(s)	DC Current	Power
2014-05-27 18:28:16	24.22 degrees Celcius	40.80 %	340.40 Lux	10.426 Volt(s)	0.530 Amp(s)	5.525780 Watt(s)
2014-05-27 18:28:15	24.22 degrees Celcius	40.80 %	340.40 Lux	10.390 Volt(s)	0.530 Amp(s)	5.506700 Watt(s)
2014-05-27 18:28:14	24.22 degrees Celcius	40.61 %	348.65 Lux	10.444 Volt(s)	0.530 Amp(s)	5.535320 Watt(s)
2014-05-27 18:28:13	24.22 degrees Celcius	40.61 %	348.65 Lux	10.444 Volt(s)	0.530 Amp(s)	5.535320 Watt(s)
2014-05-27 18:28:12	24.44 degrees Celcius	40.61 %	340.40 Lux	10.408 Volt(s)	0.530 Amp(s)	5.516240 Watt(s)
2014-05-27 18:28:11	24.22 degrees Celcius	40.61 %	340.40 Lux	10.336 Volt(s)	0.530 Amp(s)	5.478080 Watt(s)
2014-05-27 18:28:10	24.22 degrees Celcius	40.80 %	340.40 Lux	10.426 Volt(s)	0.530 Amp(s)	5.525780 Watt(s)
2014-05-27 18:28:09	24.22 degrees Celcius	40.61 %	340.40 Lux	10.408 Volt(s)	0.530 Amp(s)	5.516240 Watt(s)
2014-05-27 18:28:08	24.22 degrees Celcius	40.80 %	340.40 Lux	10.462 Volt(s)	0.530 Amp(s)	5.544860 Watt(s)
2014-05-27 18:28:07	24.22 degrees Celcius	40.80 %	340.40 Lux	10.444 Volt(s)	0.530 Amp(s)	5.535320 Watt(s)

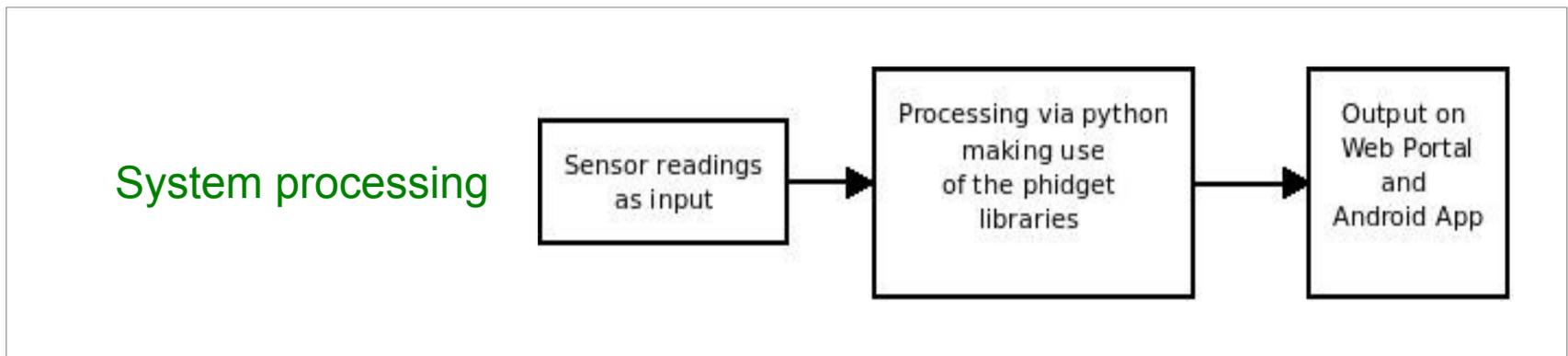
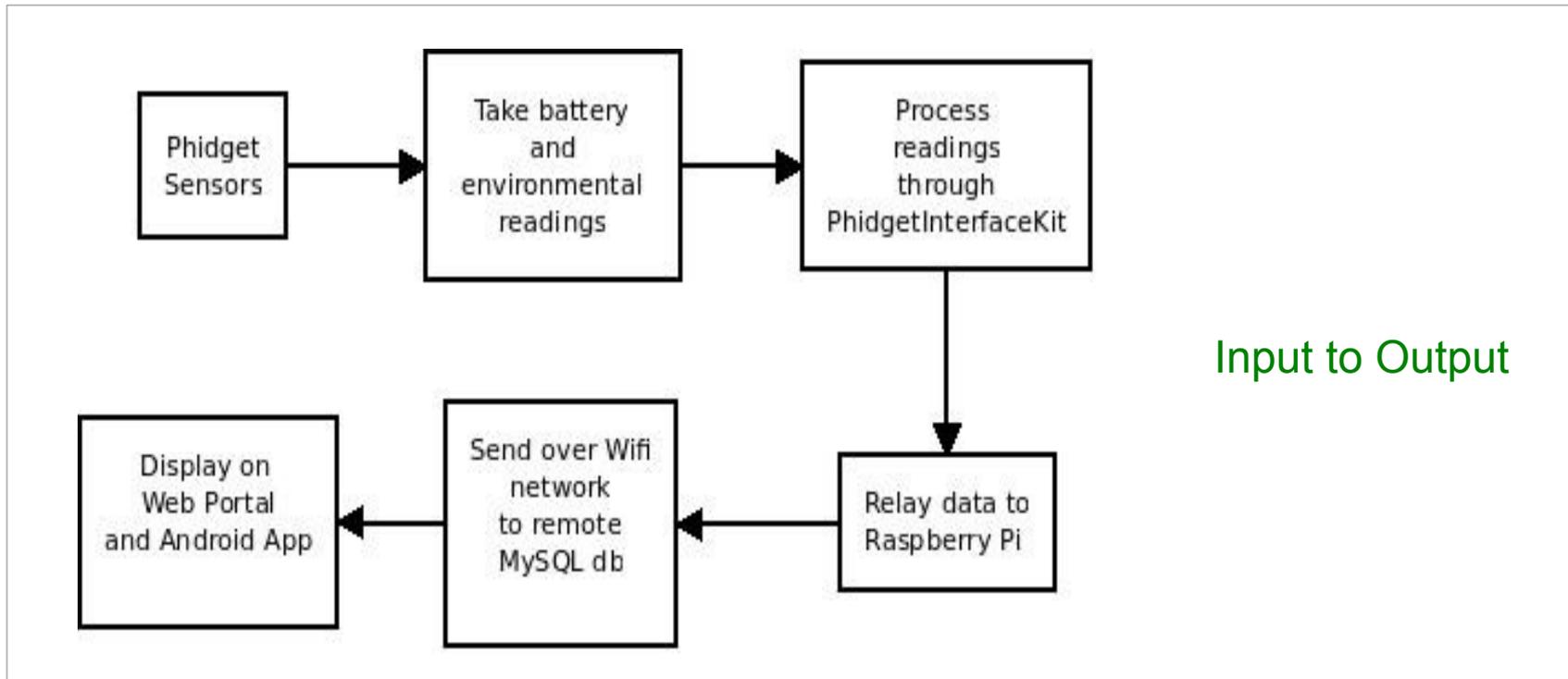
[Logout](#)

Android App

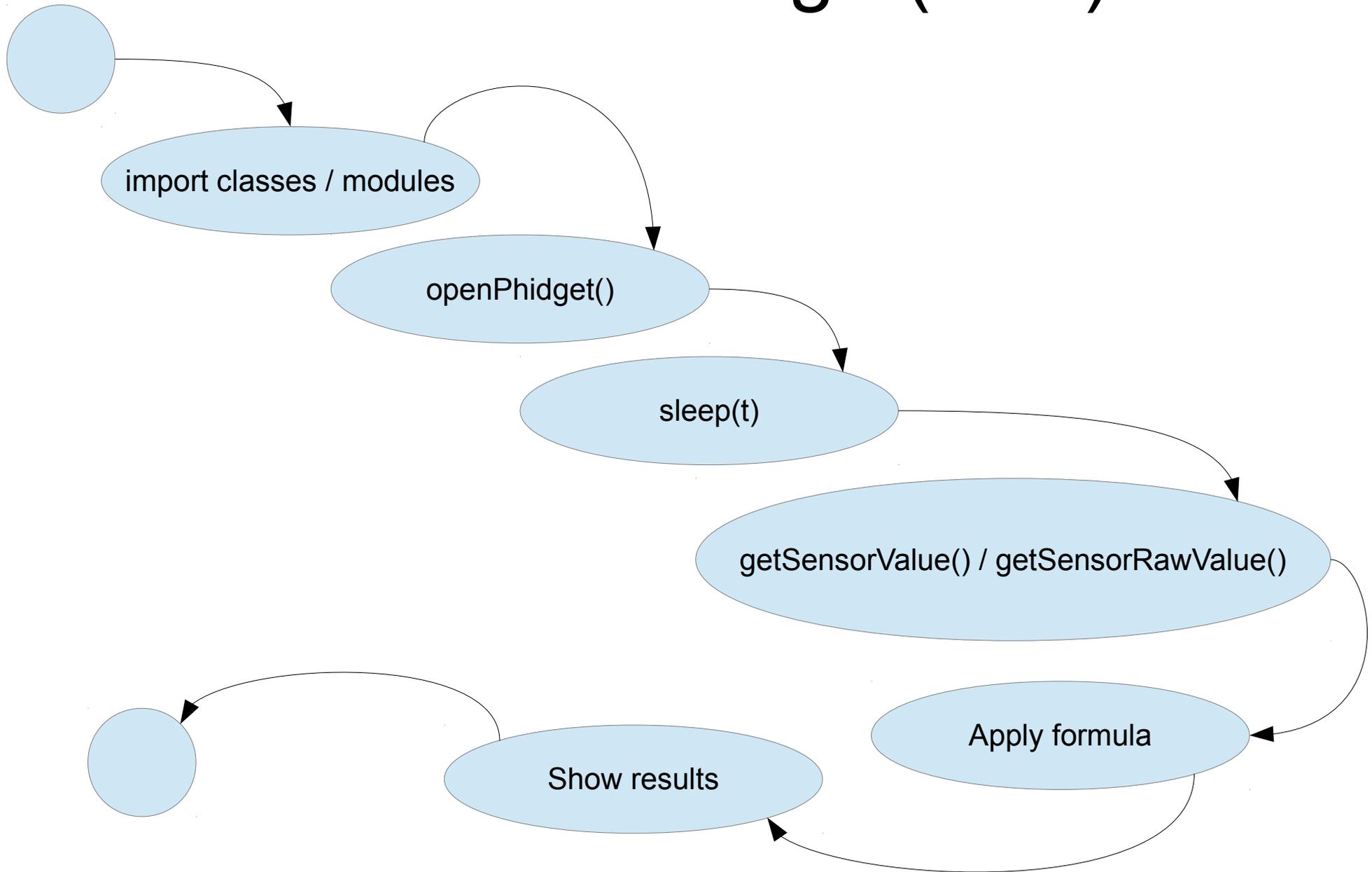


Date / Time	2014-05-14 00:52:25
Ambient Temperature	23.78 degrees Celcius
Relative Humidity	45.38%
Luminosity	166.68 Lux
DC Voltage	12.652 Volt(s)
DC Current	7.015 Amp(s)
Power	88.754 Watt(s)
Battery Temperature	20.001 degrees Celcius

High Level Design (HLD)



Low Level Design (LLD)



Project Plan

Term 1

- ✓ Meet client for user requirements gathering
- ✓ Analyse their requirements and determine the hardware and software required

Term 2

- ✓ Design the web portal
- ✓ Link it to a database
- ✓ Research code examples and modify to meet project objectives
- ✓ Prototype the remote monitoring system

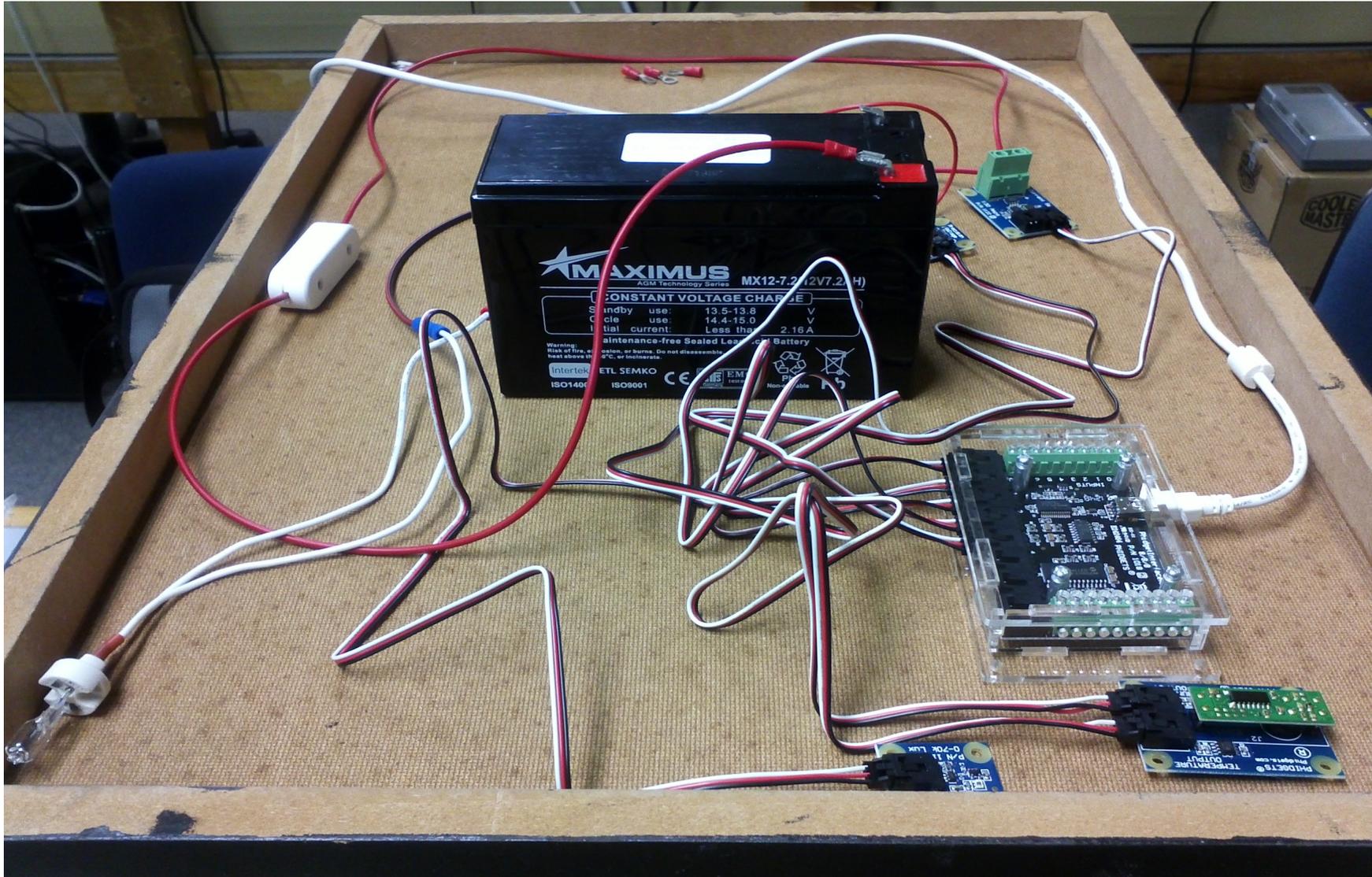
Term 3

- × Improve the prototype and begin the testing phase
- × Develop the android app
- × Test the app

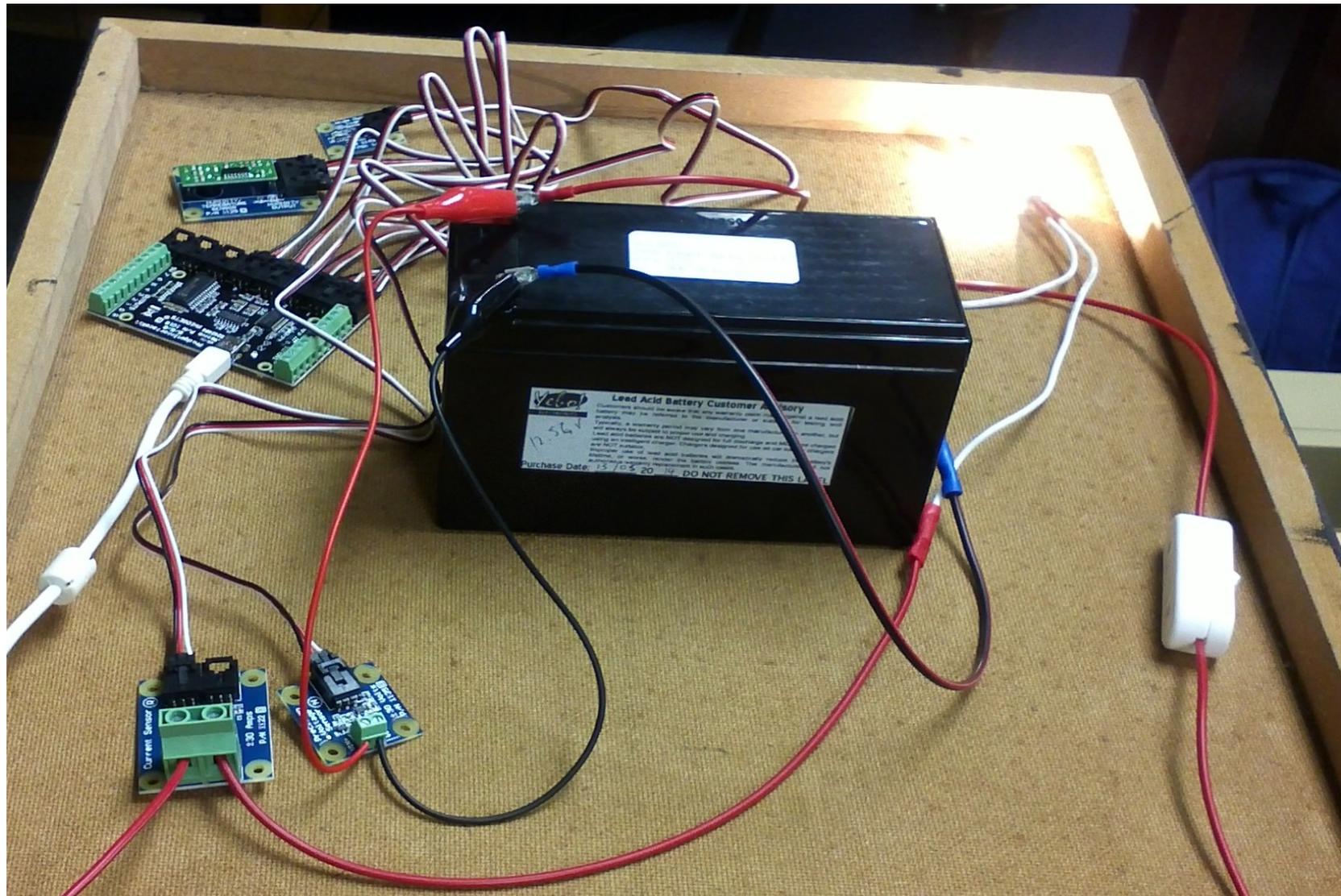
Term 4

- × Code documentation
- × Testing document
- × User's Guide

Prototype / Demo



Prototype / Demo



Prototype / Demo

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