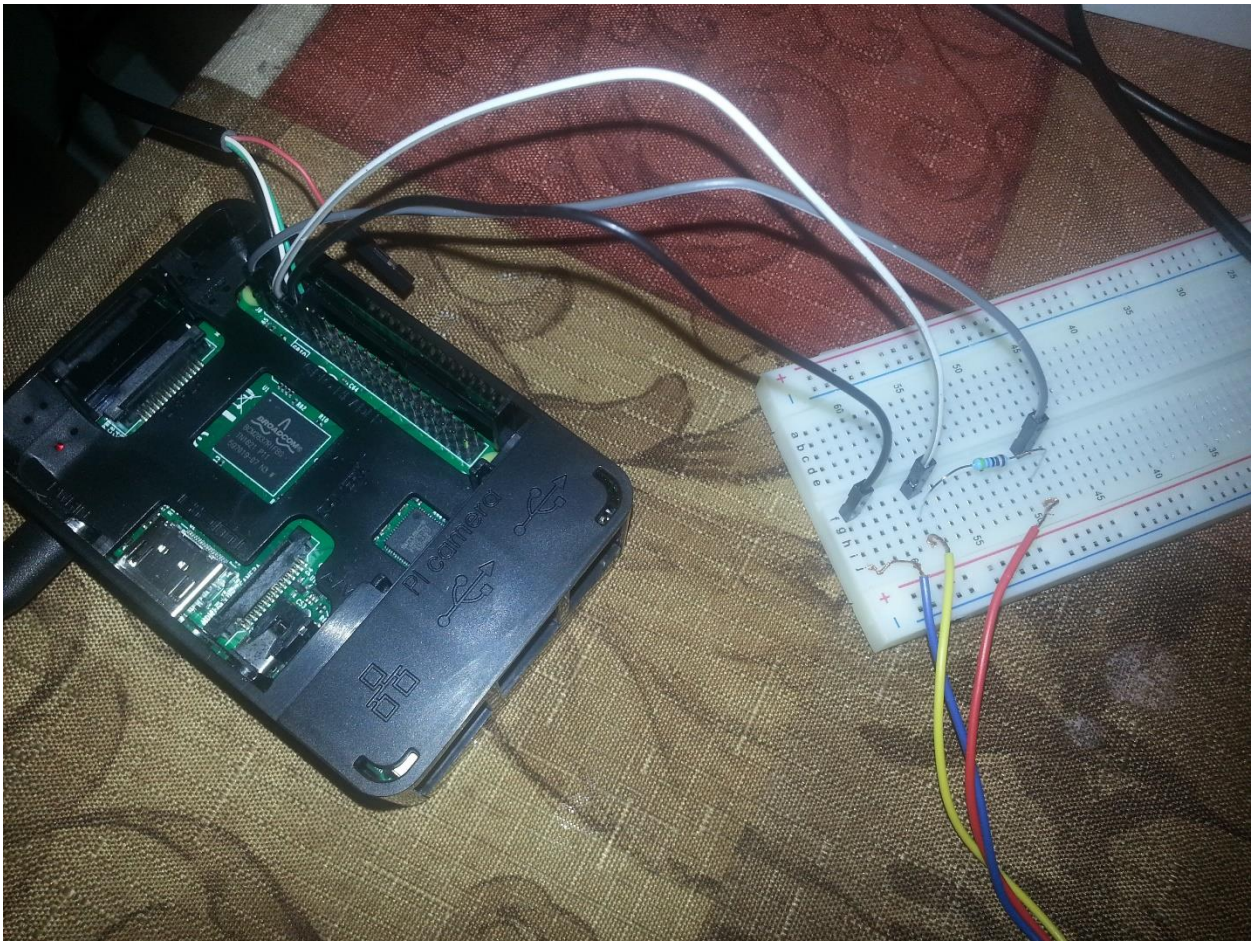
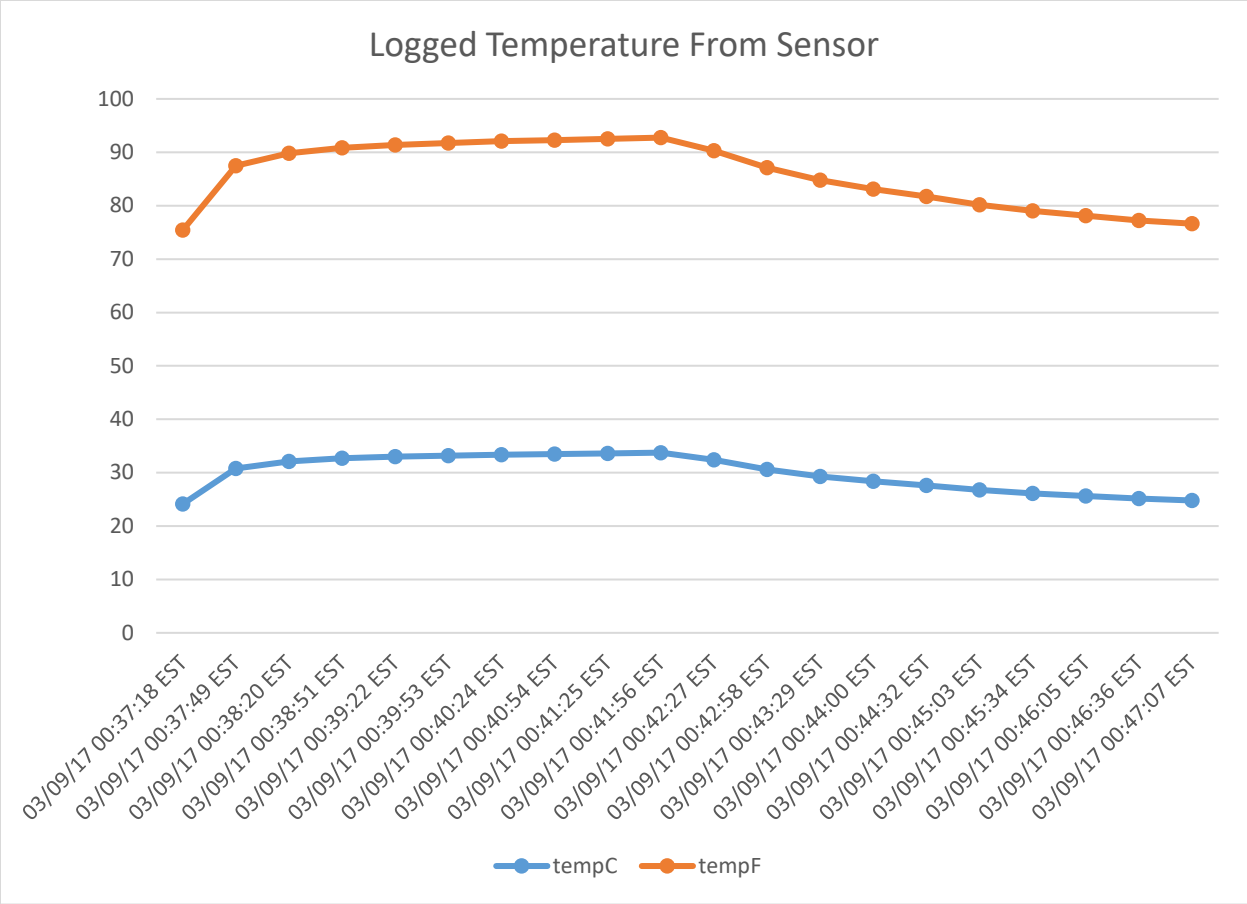
Logging of Temperature into a SQLite Database

Wiring of Temperature sensor



Python Code

```
import os
import time
import sqlite3 as mydb
import sys

# Program to read temperature from a sensor for 10 minutes
# at 30 seconds intervals.  Data is sent to a sqlite database.

# Reads temperature and time.
# Returns the current time, temperature in Fahrenheit, and temperature
in Celsius
def readTemp():
      tempfile = open("/sys/bus/w1/devices/28-000006964288/w1_slave")
      tempfile_text = tempfile.read()
      currentTime = time.strftime('%x %X %Z')
      tempfile.close()
      tempC = float(tempfile_text.split("\n")[1].split("t=")[1])/1000
      tempF = tempC*9.0/5.0+32.0
      return [currentTime, tempC, tempF]

# Calls readTemp() and logs temperature with time stamp into sqlite
#db.
def logTemp():
      con = mydb.connect('temperature.db')
      with con:
            try:
                  [t,C,F] = readTemp()
                  print "Current temperature is: %s F" %F
                  cur = con.cursor()
                  sql = "insert into temperatureTable values(?,?,?)"
                  cur.execute('insert into temperatureTable
values(?,?,?)',(t,C,F))
                  print "Temperature logged"
            except:
                  print "Error!!"

#executes the logTemp() function every 30 seconds for 10 minutes
def logActivity():
      x = 0;
      while(x<20):
            logTemp()
            time.sleep(30)
            x = x + 1

logActivity()
```


Logged Temperature From Sensor
100
90
80
70
60
50
40
30
20
10
0
03/09/17 00:37:18 EST
03/09/17 00:37:49 EST
03/09/17 00:38:20 EST
03/09/17 00:38:51 EST
03/09/17 00:39:22 EST
03/09/17 00:39:53 EST
03/09/17 00:40:24 EST
03/09/17 00:40:54 EST
03/09/17 00:41:25 EST
03/09/17 00:41:56 EST
03/09/17 00:42:27 EST
03/09/17 00:42:58 EST
03/09/17 00:43:29 EST
03/09/17 00:44:00 EST
03/09/17 00:44:32 EST
03/09/17 00:45:03 EST
03/09/17 00:45:34 EST
03/09/17 00:46:05 EST
03/09/17 00:46:36 EST
03/09/17 00:47:07 EST
tempC
tempF