ECE 331

Project 2 - Temperature Logger

See course web site for due date

Grade reduced 1% per minute after 10:59 am, rounded up to the next minute.

Items	Details	Value	Score
Deliverables	All code, scripts, and documented configuration		
25%	Printed using enscript	5%	
	4 space tabs	5%	
	Name in header	5%	
	Git		
	All code, scripts, and Makefile in git	5%	
	Reasonable commit comments	5%	
Design	SQLite3 operation	7%	
55%	Perl/Python code to query temp sensor	8%	
	PHP/Python operation	8%	
	GD/Cairo/matplotlib plot	8%	
	lighttpd setup	6%	
	Comments	6%	
	Errors checked and handled correctly	6%	
	Organized data representation	6%	
Demo	Works as described - page loads, renders, and is correct at the time of grading. Depends on public internet access.	20%	
20%			
	TOTAL		

Description

For this project, create a temperature data logger. Read the temperature with i2ctools or write a C program. The temperature can be read via the I2C bus. Insert the obtained temperature value, and the date and time of the reading into a SQLite3 database using Perl or Python. Add new data every minute. Setup and run lighttpd. Be sure to have it start at boot time. Write a PHP/Python script that graphs the data. Use php:GD, php:Cairo (SVG), or Python::matplotlib to make a graph of the data versus time for the last 24 hours worth of data. Setup your RPi so the page is accessible from the public internet.

Comment all of your code/scripts. Use git to manage revisions for all of your code, scripts, documentation, Makefiles, and any other electronic document. Include all relevant configuration including commands within the documentation. Include the instructor of the course as a “Developer” member. Name the repository “templogger”.

Deliverables

At the due date, turn in your

- Call code and script committed and commented in gitlab
- Emailed URL of the project

Demo

Email the URL of your system to the instructor before the due date. URL must be accessible on the public internet.

Grading

Grading will be done by the rubric given on the first page.