Final Project: A Secure Networked Lock

E96A Spring 2017
Due 11:59pm, June-9-2017

Introduction

You have implemented a simple networked lock designed by a USC student, and have evaluated the system by pointing out several security limitations. Now, you want to design a more secure system with your creativity.

Required Equipment

1. 1x Intel Edison Kit
2. 2x USB 2.0 A-Male to Micro B Cable (micro USB cable)
3. 1x powered USB hub OR an external power supply
4. 3-4x Grove – Starter Kit for Arduino
5. 1x Personal Computer

Project Description

You will design a more secure networked lock in this final project. You can make any modification to the baseline implementation under these restrictions/specifications

1. Hardware components: you can ONLY use Intel Edison and anything from the Grove Kit

2. Software development: you should write everything in C or shell script. Please integrate your system into a single executable file at the end

3. Human-computer interface: you should design a human-friendly friendly interface such that a new user without any prior knowledge of your system can be able to use your system solely based on your README file and terminal prompts

4. Server modification: please discuss with the instructor if you want to make any modification to the server

Deliverables

a single zip file (*groupname_final.zip*) that contains

- the source code
- a compiled binary executable
- your design document (template posted in CCLE, week 7)
- your final presentation PPT (template posted in CCLE, week 7)
- a short video demonstrating how your system works
- a README file that contain your group information (group number, names, UIDs) and explain how to run your code in details

Submission

Please submit a zip file: *groupname_final.zip* (one per group) to reiher@cs.ucla.edu and cc zhengyipiz@gmail.com via email by 11:59pm, June-9-2017