Brute Force Attack:
Evaluating the Simple Implementation

E96A Spring 2017
Due 11:59pm, May-19-2017

Introduction

You now have implemented a simple networked lock designed by a USC student. However, this design is infamous for its severe vulnerabilities. You want to evaluate the security of this simple system by brute force attack and report your results to your manager before starting your own design.

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. 1x Grove – Starter Kit for Arduino
5. 1x Personal Computer

Assignment Description

You first need to perform brute force attack on another device.

1. Exchange your Intel Edison with another group. Please provide the other group with detailed instructions to make sure that they know how to enter the password and unlock the door. **Do not tell them your password!**
2. Try your best efforts to guess what the password is until you open the door.
3. Report the password you obtained to the attacked group and the instructor.

Next, you will write a report to discuss the following issues:

1. What did you implement according to this simple design?
2. How did you interact with the sensor and the terminal? How did you use the light sensor to generate your password? How did the terminal inform you about the possible events?
3. Which part(s) did you find difficult to implement?
4. How did you perform a brute force attack? Which group were you attacking? How long (roughly) did it take to obtain the correct password by brute force attack? What is their correct password?
5. Any security limitations of this system (at least 2)
6. (Optional) Anything else you find valuable to discuss

Your report should be at least one page and should discuss all the issues above in details.

Submission

Please submit a pdf file of your report: *groupname_bruteforceattack.pdf* (one per group) to zhengyipiz@gmail.com by 11:59pm, May-19-2017