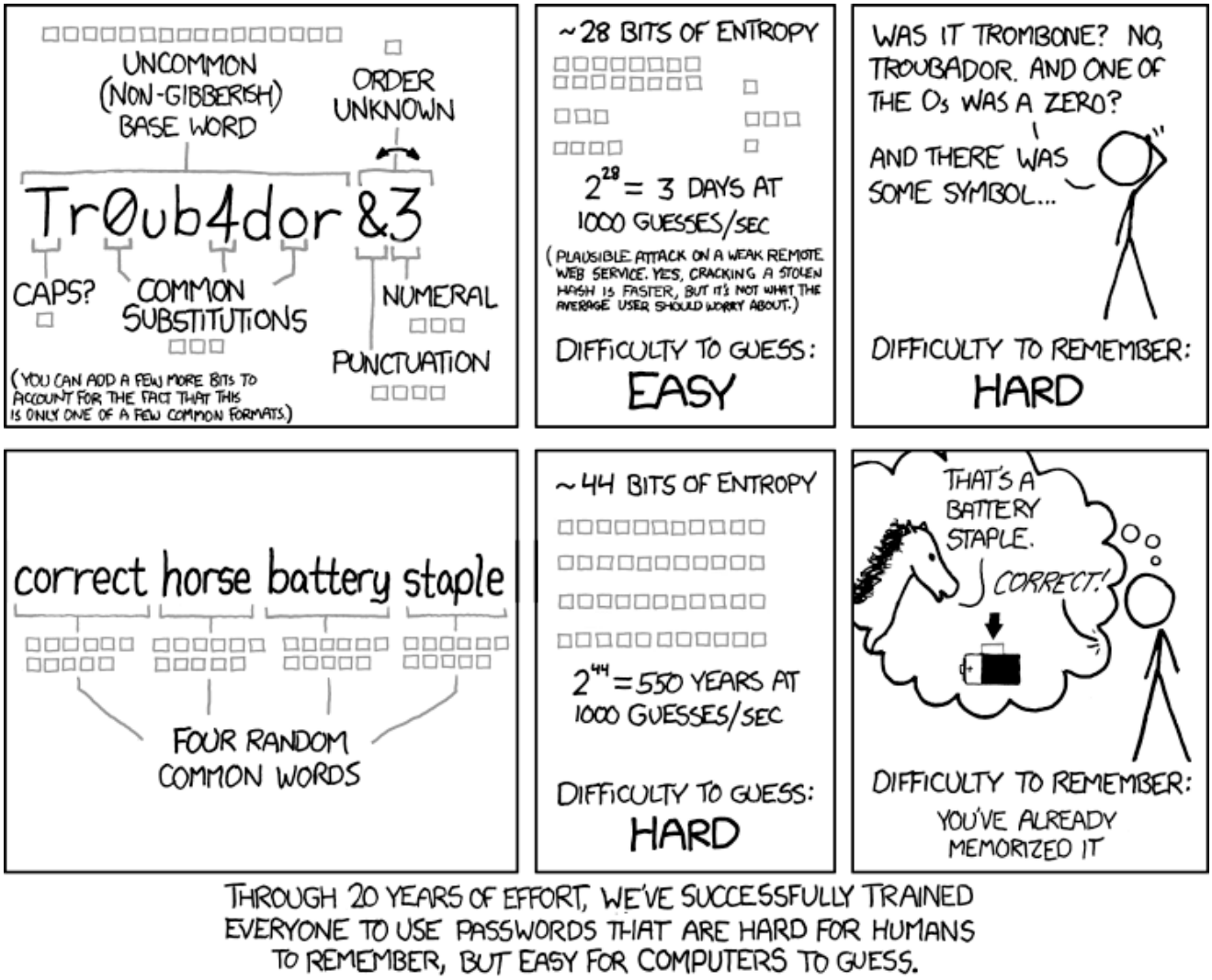
DAILY CHALLENGE

How safe is your password?

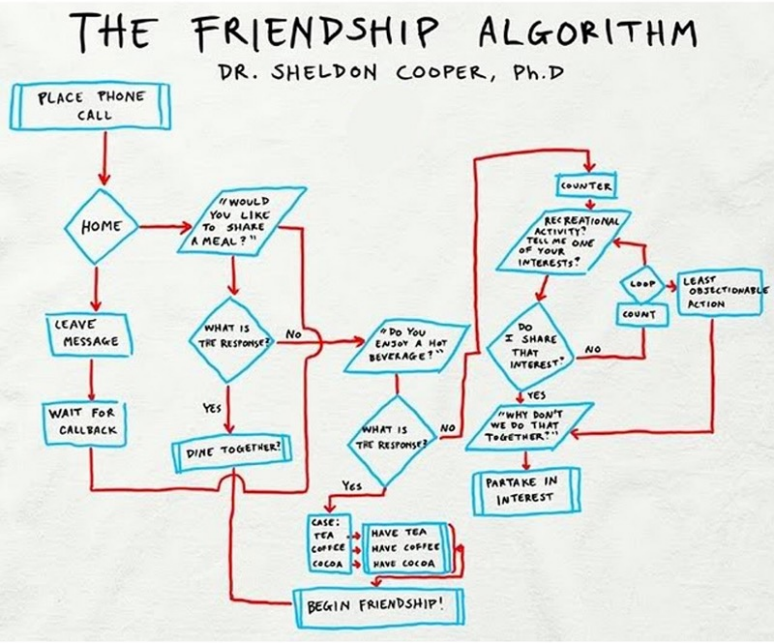
Below is a comic found from XKCD called “Password Strength” (http://xkcd.com/936/)



The idea behind the comic strip is quite simple. An 11 digit password with random characters is easier for a computer to guess than a 25 digit password filled with simple words stringed together in a sentence. How does this work? Assuming the computer is just guessing every combination (at 1000 guesses/sec according to the comic) it uses trial and error to figure out the password. If the password has less digits, that means it wont take as many guesses to figure out the answer.

LinusTechTips covers the important topic of password safety and creating a secure password
https://youtu.be/t8SQo3R7qeU

Today we will be creating an algorithm! What is an algorithm? It is quite simply define as "*a process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer.*" This algorithm will be similar to a the aforementioned password cracker but in a much simpler and less malicious way. There are a few things you will need to know before completing this challenge so make sure you look over the required background information.



PREREQUISITES

1. How to write a "Hello World" application in C++
2. Basic understanding of variables (int, string, float etc.)
3. Knowledge of loops (for & while)
4. Collecting a users keystrokes

What's the challenge?

A user will enter a 'password' and your program will tell the user how many digits the password is. I don't condone hacking but after completing this challenge, you can take it further and start guessing combinations. Keep an eye out for next week where we hack into Google's data centres. Whether you are totally freaked out by this new challenge or know exactly what to do, get started immediately as we will be giving a shoutout to the first one to complete the challenge. Don't worry if you can't figure it out right away, keep trying different things and remember, Google is your friend! We will be going through the solution in our next meeting so you can compare methods and ask lots of questions when we get to it.

A great website to learn the required material and more stuff on C++ is at http://www.cplusplus.com/

"There are no secrets better kept than the secrets that everybody guesses."

- GEORGE BERNARD

Until then, keeping coding!