Intro Cybercamp

Curated Pathways to Innovation

- Directions Manual (bit.ly/cpiManual)
- Follow the steps in the manual to create an account with CPI
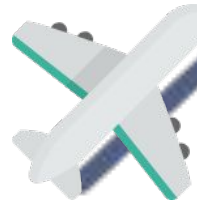- Complete steps 1 through 3, including filling out the STEM Pre-Camp Survey

What is cybersecurity?

"Cybersecurity is the practice of protecting systems, networks, and programs from digital attacks..."
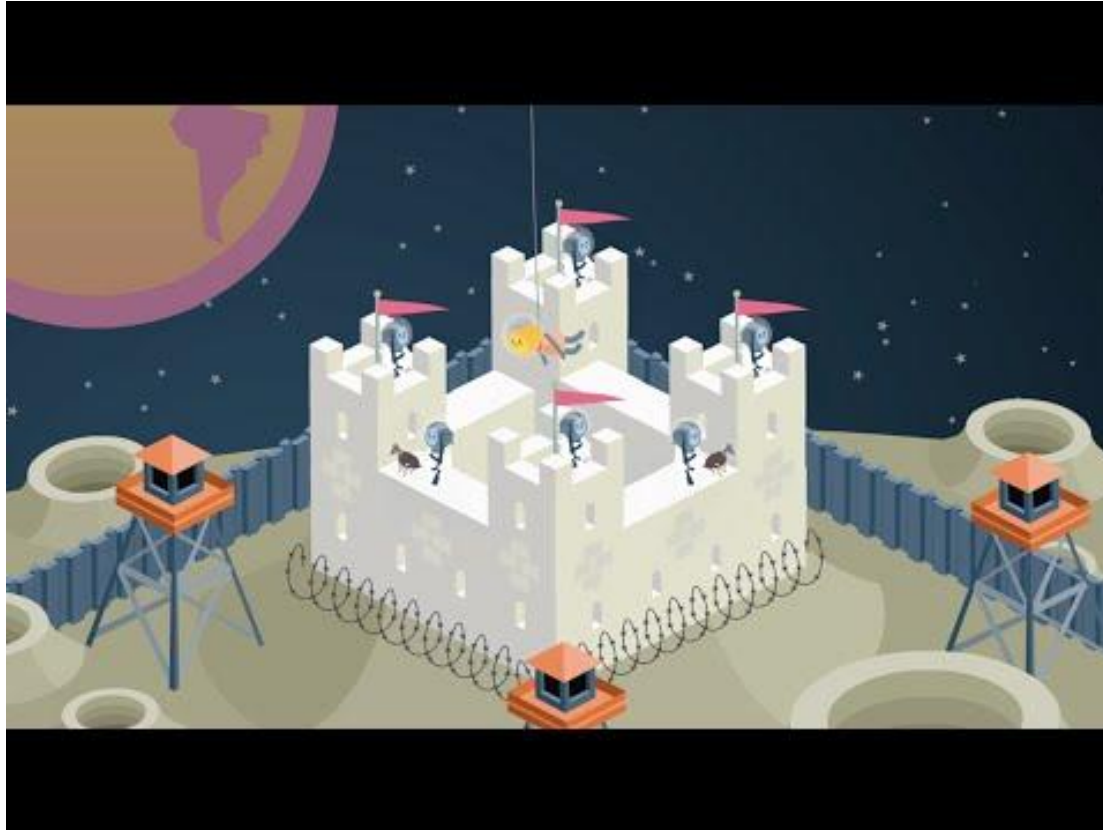
-Cisco

Things that rely on computers:

GPS
x2 Camera
Microphone
Photos
Files

Why is cybersecurity important?

Cybersecurity: Welcome & Overview

★ Icebreaker

★ The Week Ahead

The 10 Cyber Commandments

1. Thou shall NOT use a computer to harm other people.
2. Thou shall NOT interfere with other people's computer work.
3. Thou shall NOT snoop around in other people's digital files (no matter if stored on their computers, phones, or on the cloud).
4. Thou shall NOT use a computer to steal.
5. Thou shall NOT use a computer to bear false witness.

The 10 Cyber Commandments

6. Thou shall NOT copy or use proprietary software for which you have not paid.

7. Thou shall NOT use other people's computer resources without authorization or proper compensation.

8. Thou shall NOT appropriate other people's intellectual output.

9. Thou shall think about the social consequences of the program you are writing or the system you are designing.

10. Thou shall always use a computer in ways that ensure consideration and respect for your fellow humans.

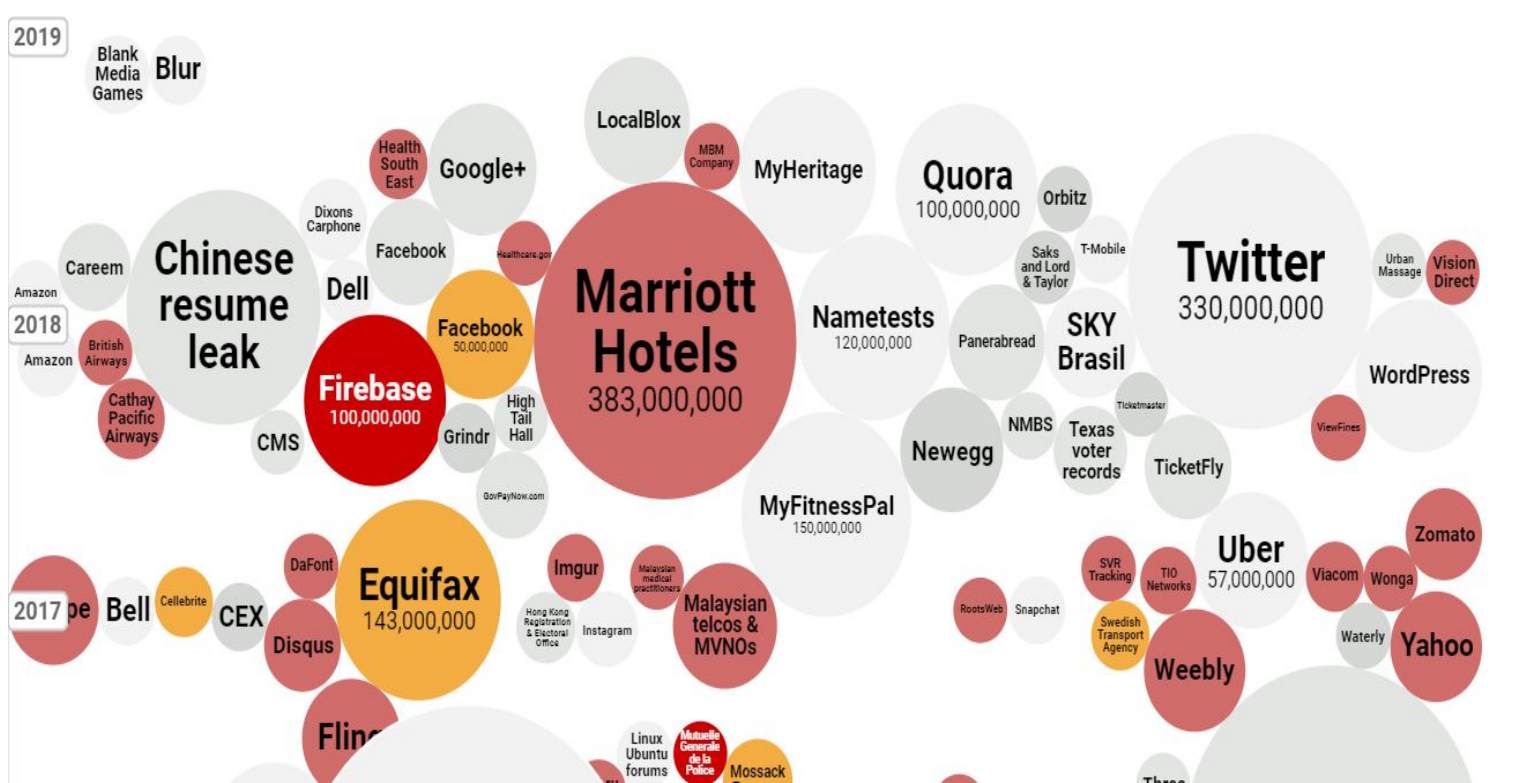# Why is cybersecurity important?

Threat Maps

Go to:

Live Cyber Attack Threat Map

to see real-time cyber attacks that are occurring around the world right now.

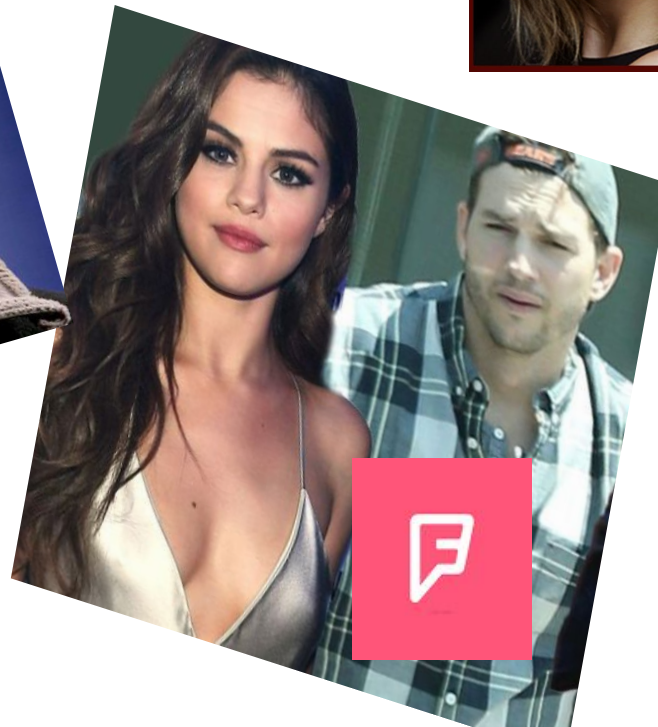Can you identify the attacks, types and locations? Are any of them occurring near you now?

Why is cybersecurity important?

World's Biggest Data Breaches

Why is cybersecurity important?

Some famous people who have been hacked...

Part 1: When Does Your Privacy Matter?

E-Handout

1. baycyber.net/intro
2. Highlight over Day 1
3. Click on this activity

Threat Map

World's Biggest Data Breaches

When Does Your Privacy Matter Activity
Social Sleuth Activity
Social Sleuth Profiles

Phishing Quiz
How Secure Is Your Password Activity
Have I Been Pwned?

Android Security Settings
iPhone Security Settings

A Cyber Privacy Parable

Safety Online: The Basics

- Chat only with trusted, verified individuals
- Never publically share these things online:
  - Social Security number
  - Your current location
  - Student ID number
  - Other Personally Identifiable Information (PII)
- Never share your password
- Always log out when you are done
- Never post anything you do not want public

Safety Online: Risky Sites

- Online Shopping

- Social Media

- Games or applications that require subscriptions

- Any other website that requires Personally Identifiable Information (PII)
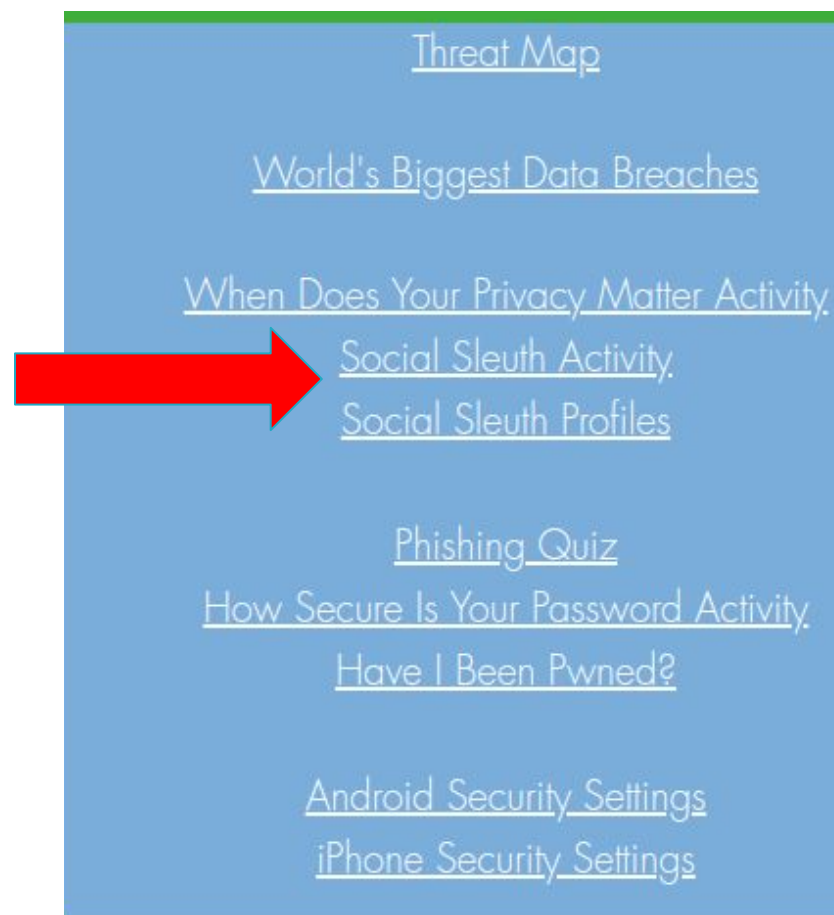
Part 2: Social Sleuth

E-Handout

Social Media Links

1. baycyber.net/intro
2. Highlight over Day 1
3. Click on both "Social Sleuth" links

Threat Map

World's Biggest Data Breaches

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Safety Online: Social Media Tips

- Be picky

- Do not post your location

- Be careful with apps

- Assume everything you post online is permanent

- Don't over-share

- Customize and update your security settings

Facebook®

Snap Inc.®

Safety Online: Safe Browsing

- Do not use public Wi-Fi to access risky sites
- Check the address for spoofs

⚠ http://bank0famerica.com

- Use a secure website
  - Look for an "s" after "http" in the web address
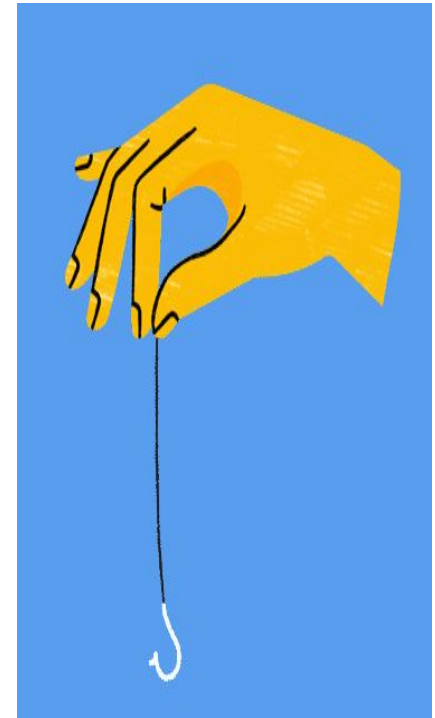 - Look for a 'padlock' in the browser address bar

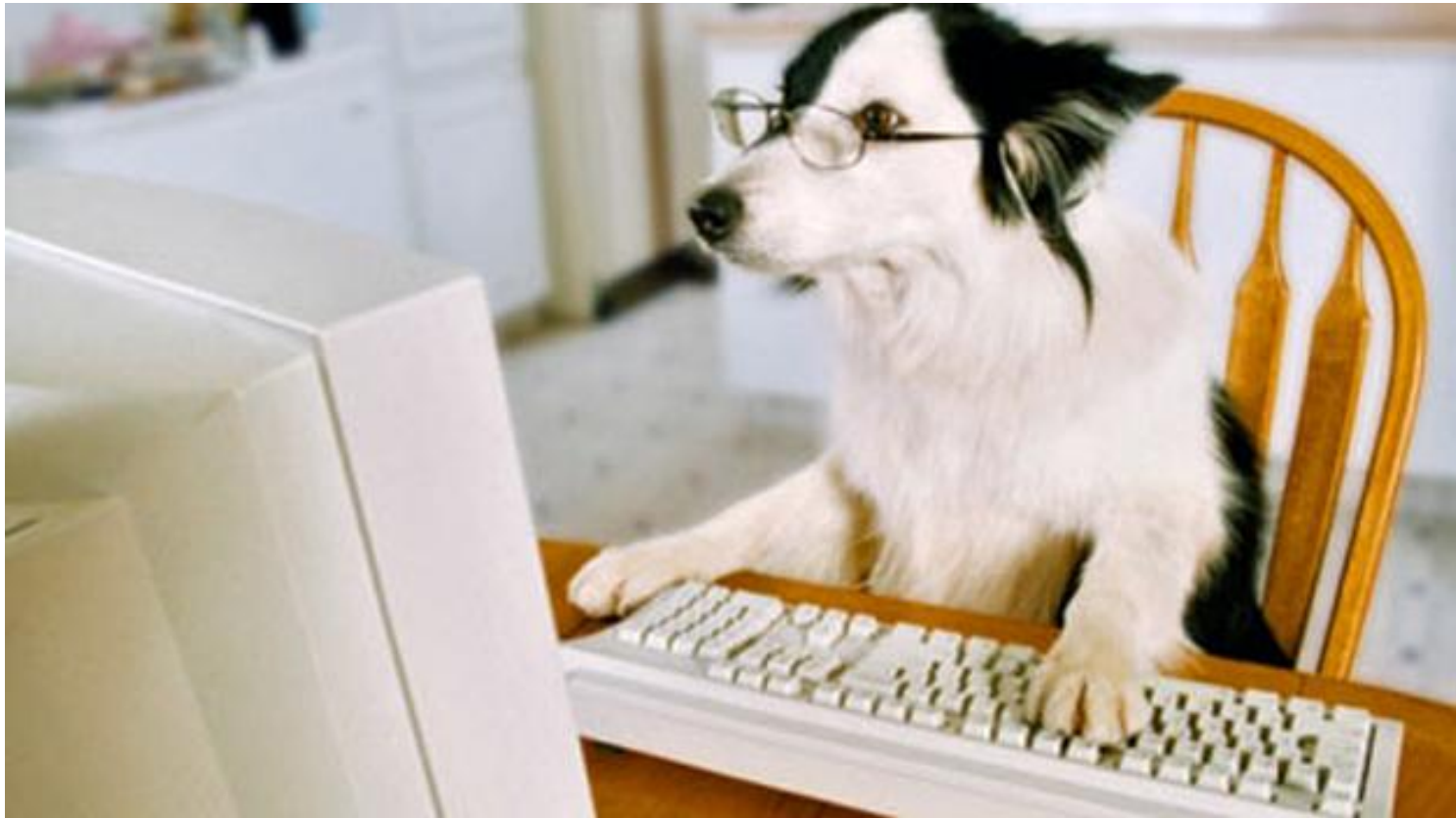🔒 https://www.google.com/

Can you Spot When You're Being Phished?

Take the Quiz

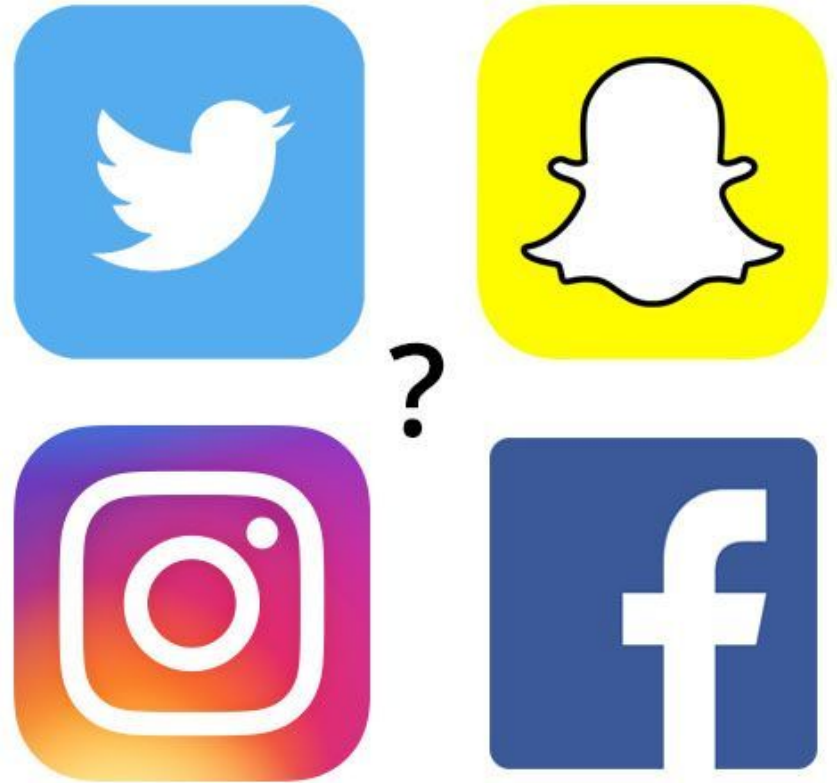# Passwords

Username : admin
Password : admin

What's Your Password?

Passwords

The increasing amount of personal information we put on social media also makes it easier for other people to guess our passwords, including strangers, who can access our social media profiles.

Passwords

Further, some 'quizzes' that distributed on social media are designed to steal passwords or password recovery answers e.g. questions like 'What was your first pet's name?' and 'What town did you grow up in?' are commonly used to help people recover forgotten passwords.
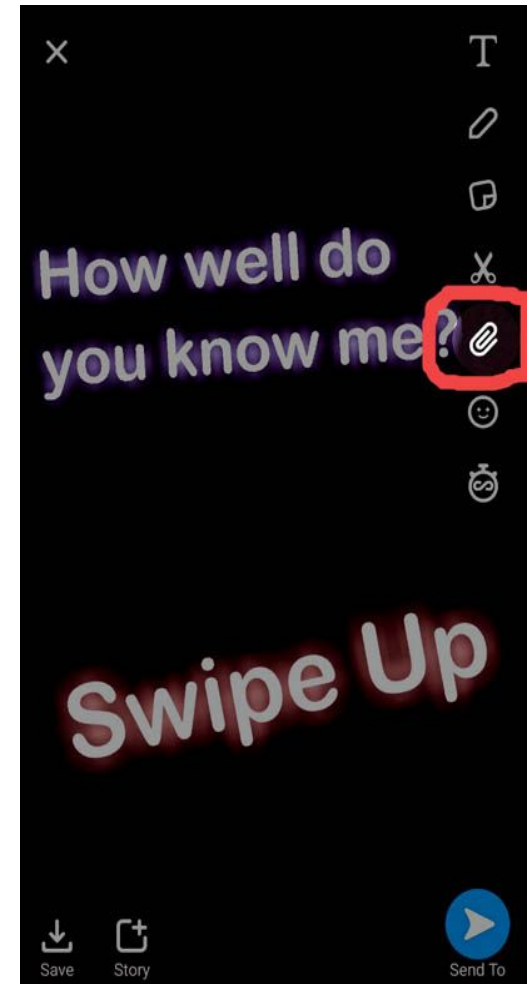
Weak & Common Passwords

- Do Not Share Your Password With ANYONE

    - Any of the top 500 million passwords are known!

- Do not use any personal info that can be easily found by other means:
    – Name, Birthday, Pet's Name, Mother's Maiden Name, Hometown

- Secure passwords are passwords that are difficult to guess by others or be cracked by computers designed for this purpose.

Have You Been Pwned?

Password 'cracking' involves a computer using a ***brute force attack*** to systematically try many password combinations until it finds the one that is your password. Simple and commonly used passwords are easily cracked.
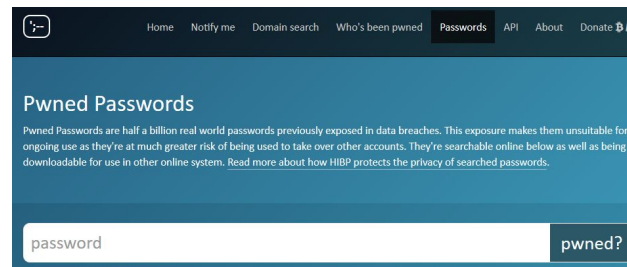
Activity: Have you been pwned?

https://haveibeenpwned.com/Passwords

Creating a Strong Password

- Do not use dictionary words
- Try passphrases instead that are computationally hard to crack

Where's the beef?

Wh   D@   B33f?

WhD@B33f?

Old Gmail Password: Ronald!23$GMA
New Password: WhD@B33f?GMA

Old Facebook Password: Ronald!23$FAC
New Password: WhD@B33f?FAC

Passwords

'Computationally hard to crack' typically means that arriving at the solution would take a computer trying billions of possible keys per second unlikely to arrive at the correct key in a reasonable amount of time.

Passwords

In 2012 a password cracking machine was unveiled that could cycle through as many as <u>350 billion guesses per second</u>. In eight hours, it was able to brute force every possible eight-character password combination containing upper- and lower-case letters, digits, and symbols.
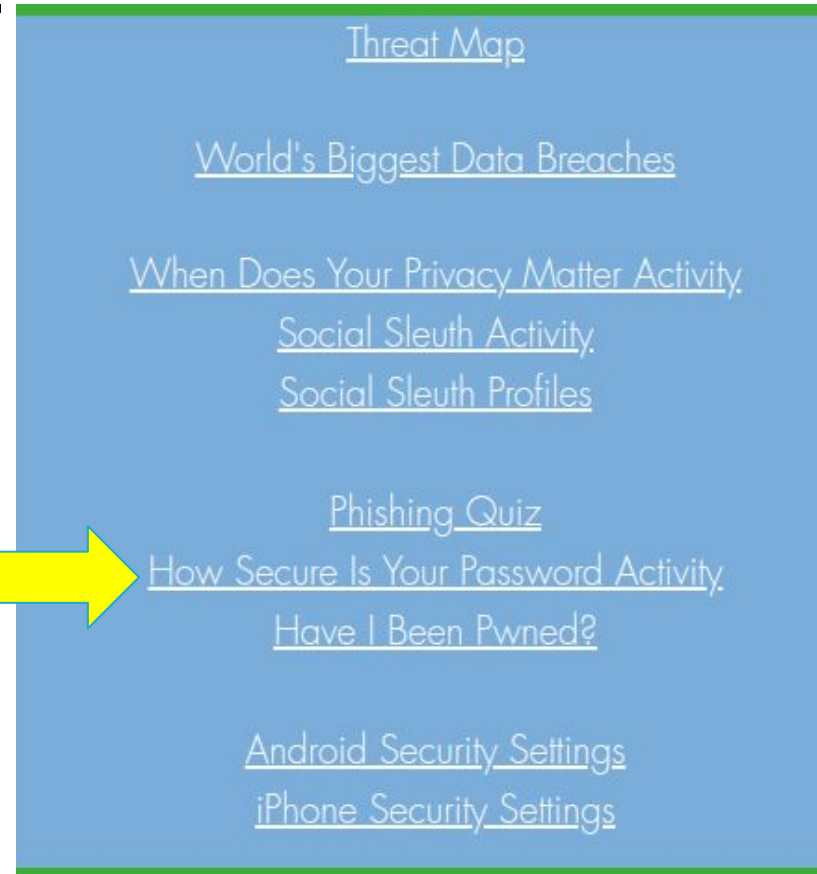
How Secure is Your Password?

Choosing a good password is meaningful because we want the key to be hard for a computer to guess. So….

How Secure
is Your Password?

E-Handout w/link

1. baycyber.net/intro
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Passwords

- Live attack? Breach in progress? You can foil cracking attempts as they happen
- Restricts access if your password is stolen
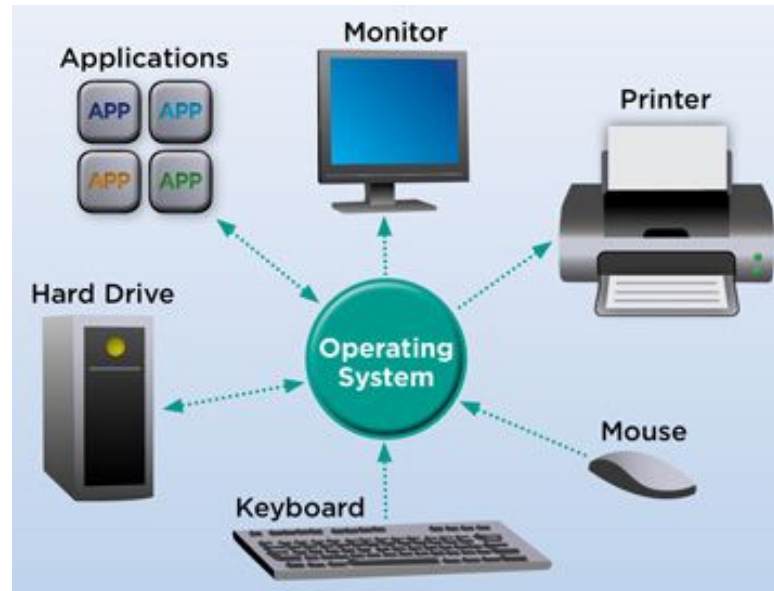- Best to change it every few months
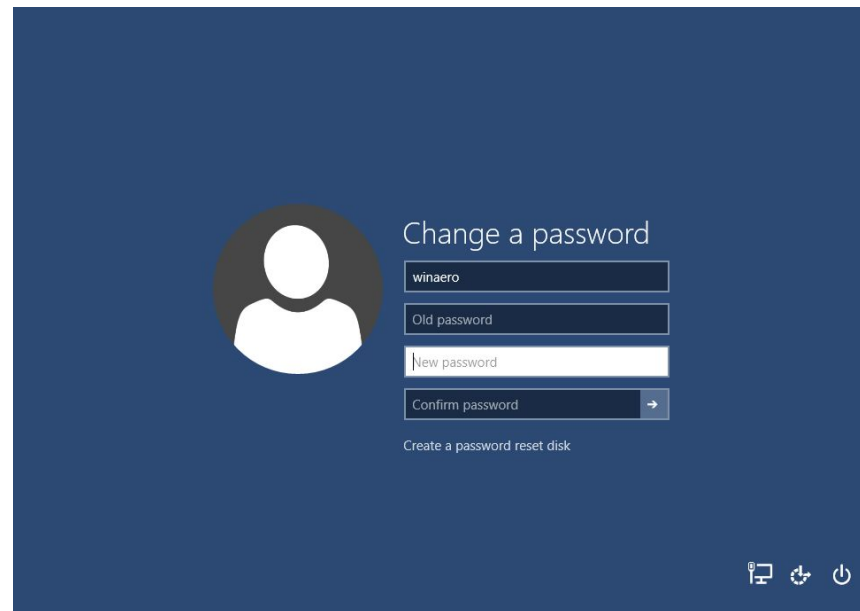
PASSWORDS ARE LIKE UNDERPANTS

Change them often, keep them private and never share them with anyone.

The Job of the Operating System

An operating system is the most important software that runs on a computer.Your computer's operating system (OS) manages all of the other software and hardware on the computer.

The Job of the Operating System

Most of the time, there are several different computer programs running at the same time, and they all need to access your computer's central processing unit (CPU), memory, and storage. The operating system coordinates all of this to make sure each program gets what it needs.

Without an operating system, a computer is useless.

Office Space Analogy

Hard Drive = File Cabinet. Great for storing stuff, not great working from. It takes longer to get stuff from there than from your desk space.

Defragmenting = Organizing a messy file cabinet.

So much space!

RAM = Desk Space. It holds the stuff you're working on. The more of it you have, the more you can have open at once and the more stuff you can set aside for quick access later (i.e. cache).

Virtual Memory (Windows) or Swap (Linux) = Putting stuff in the file cabinet if you run out of desk space (RAM).

Office Space Analogy

OS = Person at the desk. They do all the work to manage files, makes sure everything is where it needs to be on the desk, makes sure stuff that needs to get done is getting done, etc.

CPU = The mind of the person at the desk. Does all the thinking and processing for both the OS and any tasks that are being done.
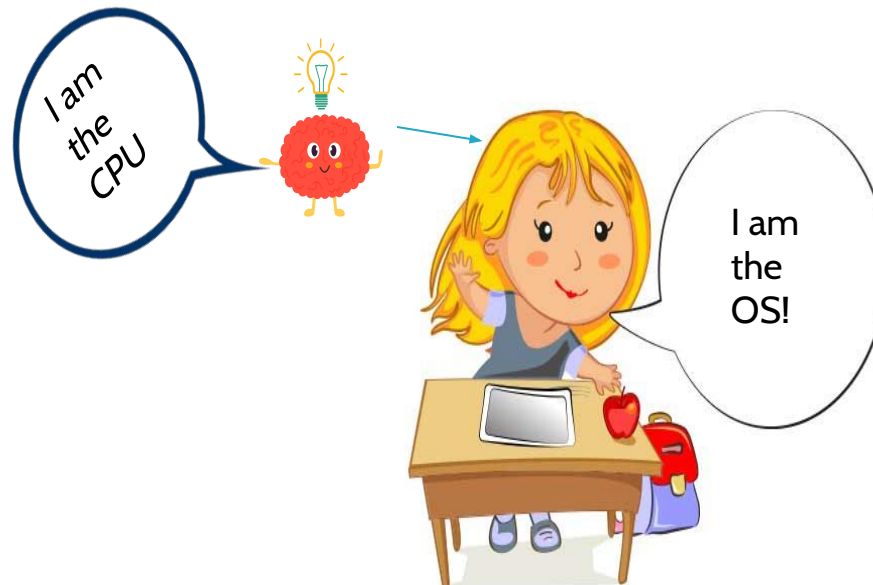
Which of these have (or may have) Operating Systems?

Brightest Flashlight Free ®

GoldenShores Technologies, LLC

X

This app has access to:

📍 Location

- approximate location (network-based)
- precise location (GPS and network-based)

📞 Phone

- read phone status and identity

🖼 Photos/Media/Files

- read the contents of your USB storage

- modify or delete the contents of your USB storage

☰ Storage

- read the contents of your USB storage
- modify or delete the contents of your USB storage

📷 Camera

- take pictures and videos

📶 Wi-Fi connection information

- view Wi-Fi connections

📱 Device ID & call information

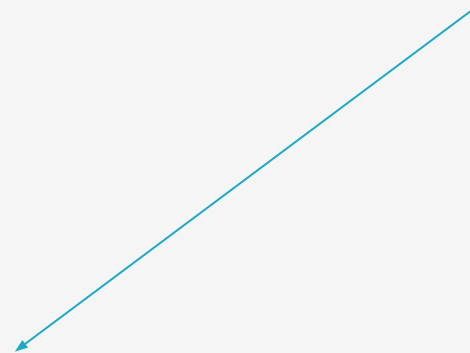- read phone status and identity

Brightest Flashlight Free ®

GoldenShores Technologies, LLC

[?] Other

- disable or modify status bar
- read Home settings and shortcuts
- receive data from Internet
- view network connections
- control flashlight
- full network access
- prevent device from sleeping
- install shortcuts
- uninstall shortcuts

REALLY?

Updates to Brightest Flashlight Free ® may automatically add additional capabilities within each group. Learn more

Cancel

Mobile Security: Securing Your Phone

Android

iPhone

Intro Cybercamp