

# CS50 for JDs

[cs50.harvard.edu/hls](https://cs50.harvard.edu/hls)

# Artificial Intelligence

[cs50.harvard.edu/hls/2021/winter/lectures/7](https://cs50.harvard.edu/hls/2021/winter/lectures/7)

# Assignment 6

[cs50.harvard.edu/hls/2021/winter/assignments/6](https://cs50.harvard.edu/hls/2021/winter/assignments/6)

# Office Hours

[cs50.harvard.edu/hls/2021/winter/hours](https://cs50.harvard.edu/hls/2021/winter/hours)

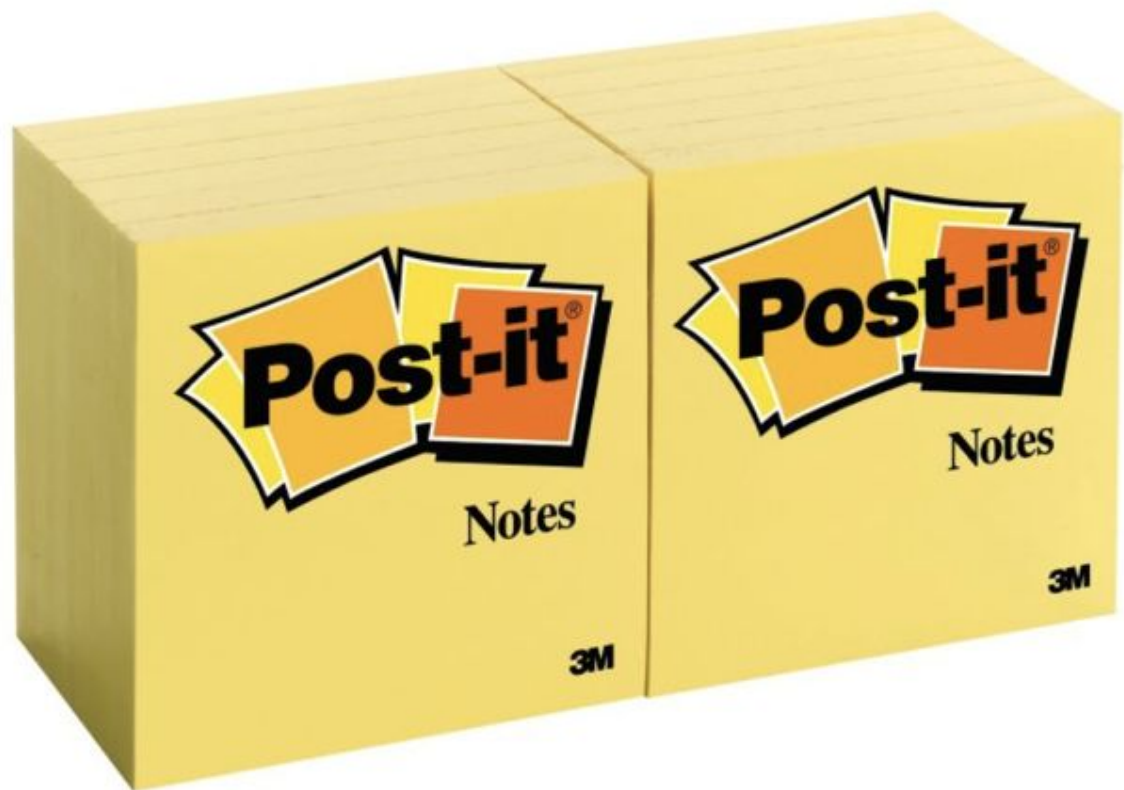
# Final Assignment

privacy, security

secure

passwords





1. 123456
2. 123456789
3. qwerty
4. password
5. 1234567
6. 12345678
7. 12345
8. iloveyou
9. 111111
10. 123123

brute-force  
attacks



4-digit passcode

$$10 \times 10 \times 10 \times 10$$

10,000

4-letter passcode



$$52 \times 52 \times 52 \times 52$$

7,311,616

4-character passcode

94 × 94 × 94 × 94

78,074,896

8-character passcode

94 × 94 × 94 × 94 ×

94 × 94 × 94 × 94

6,095,689,385,410,816





9:41

Tuesday, July 24

**iPhone is disabled**

try again in 1 minute

Emergency



**iPhone is disabled**  
try again in 1 minute

Emergency

9:41

Tuesday, July 24

iPhone is disabled

try again in 1 minute

Emergency

Google Fi

📶 🔒 📶 🔒 60%



11:27

Thu, May 28 ☁️ 24°C

Too many attempts. Try again later.

Google Fi

📶 🔇 📶 🔇 🔋 60%



11:27

Thu, May 28 ☁️ 24°C

Too many attempts. Try again later.



Too many attempts. Try again later.

two-factor  
authentication







password managers

1password.com

lastpass.com

...



<https://zoom.us/j/5551112222>

<https://zoom.us/j/5551112222?pwd=#####>

email

## Confidential mode

Recipients won't have the option to forward, copy, print, or download this email. This message may still be visible to your employer or school. [Learn more](#)

### SET EXPIRATION

Expires in 1 week



Tue, Jan 28, 2020

### REQUIRE PASSCODE

All passcodes will be generated by Google. [?](#)



No SMS passcode



SMS passcode

Cancel

Save



# Report Phishing



Deleting helps you, reporting helps everyone.

**phishing@harvard.edu**

Learn to click wisely at [security.harvard.edu](https://security.harvard.edu).



PGP

digital signatures

encryption

secret-key cryptography

Or fher gb qevax lbhe Binygvar.

Be sure to drink your Ovaltine.

HTTPS



public-key cryptography

wireless networks

wired networks

VPNs

hashing

forgot password?

[haveibeenpwned.com](https://haveibeenpwned.com)

end-to-end encryption







**“WhatsApp” Would Like to  
Access Your Contacts**

WhatsApp syncs only phone numbers from your address book to WhatsApp servers to help you connect with other WhatsApp users.

Don't Allow

OK

Tap “Agree & Continue” to accept the  
WhatsApp [Terms of Service](#) and  
[Privacy Policy](#)

Agree & Continue

ransomware

storage







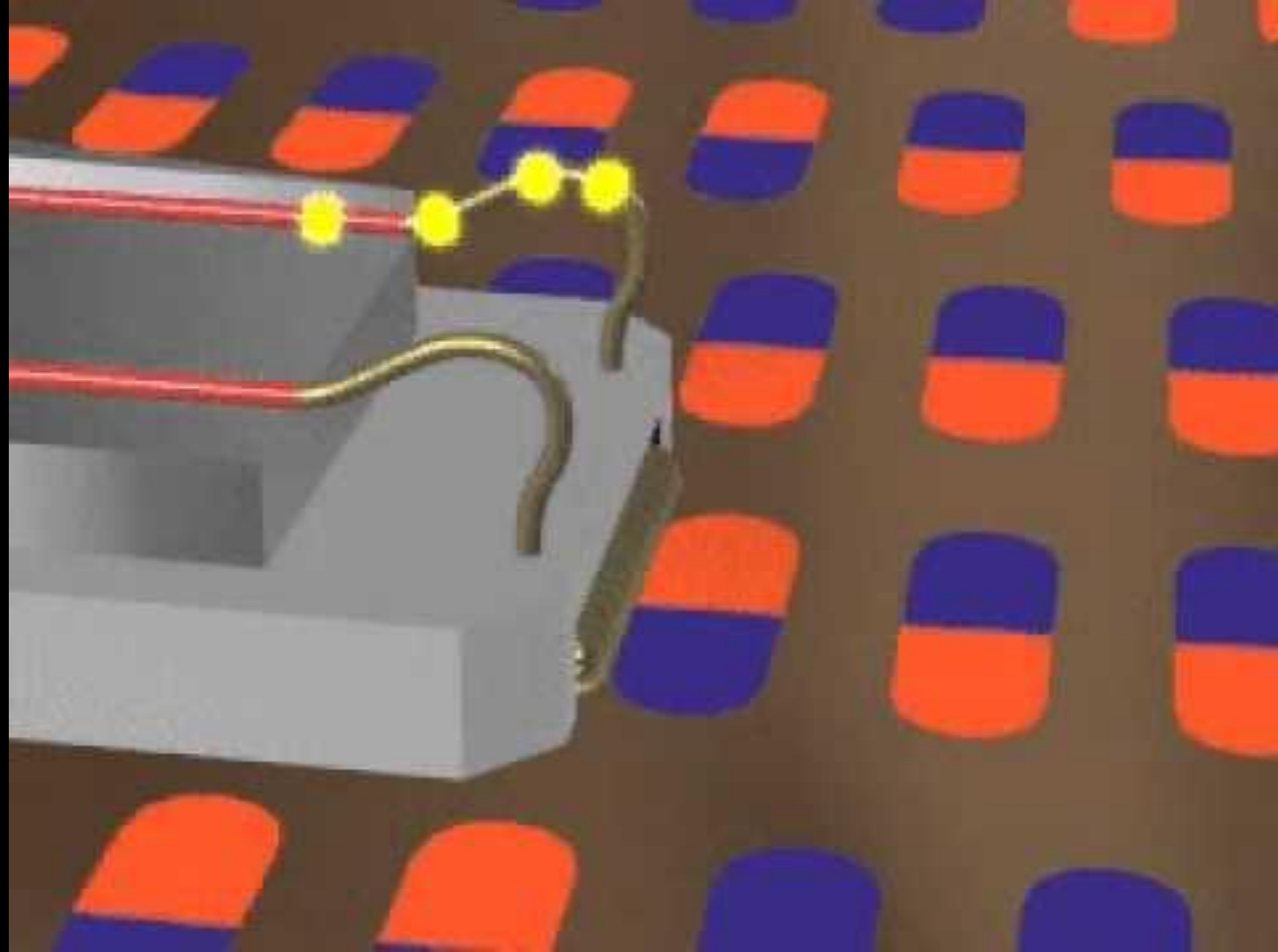












[dban.org](http://dban.org)













full-disk encryption

automatic updates

open-source software

incognito mode

cookies



gegen-den-strich.com

FERNANDEZ



de-identification

**Netflix Prize**

**COMPLETED**

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