

This is CS50

passwords

1. 123456
2. 123456789
3. picture1
4. password
5. 12345678
6. 111111
7. 123123
8. 12345
9. 1234567890
10. senha

4-digit passcode

brute-force attacks



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

10,000

4-letter passcode

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

7,311,616

4-character passcode

$$94 \times 94 \times 94 \times 94$$

78,074,896

8-character passcode

$94 \times 94 \times 94 \times 94 \times 94 \times 94 \times 94 \times 94$

6,095,689,385,410,816





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.



Sign in

to continue to Gmail

[Forgot email?](#)

Not your computer? Use Guest mode to sign in privately.

[Learn more](#)

[Create account](#)

Next

two-factor authentication



2-step Verification

Use your device to sign in to your Google Account.



Enter verification code

Get a verification code from the "Google Authenticator" app

Done

☒ Don't ask again on this computer

password managers

- Credential Manager
- Keychain
- 1Password
- LastPass
- ...

email

Confidential mode

Recipients won't have the option to forward, copy, print, or download this email. [Learn more](#)

SET EXPIRATION

Expires in 1 week



Thu, Nov 4, 2021

REQUIRE PASSCODE

All passcodes will be generated by Google. 



No SMS passcode



SMS passcode

Cancel

Save



New Tab



Search Google or type a URL



Incognito



You've gone Incognito

Now you can browse privately, and other people who use this device won't see your activity. However, downloads, bookmarks and reading list items will be saved. [Learn more](#)

Chrome won't save the following information:

- Your browsing history
- Cookies and site data
- Information entered in forms

Your activity might still be visible to:

- Websites you visit
- Your employer or school
- Your internet service provider

Block third-party cookies

When on, sites can't use cookies that track you across the web. Features on some sites may break.



encryption

U I J T X B T D T 5 0

T H I S W A S C S 5 0

https://

end-to-end encryption





Schedule Meeting

Topic

Date & Time

10/29/ 2021 ▾

1:00 PM ▾

 to

2:00 PM ▾

10/29/ 2021 ▾

☐ Recurring meeting Time Zone: Eastern Time (US and Canada) ▾

Security

☒ Passcode ⓘ
Only users who have the invite link or passcode can join the meeting

☐ Waiting Room
Only users admitted by the host can join the meeting

☐ Only authenticated users can join: Sign in to Zoom

Encryption

☐ Enhanced encryption ⓘ ☒ End-to-end encryption ⓘ

Several features will be automatically disabled when using end-to-end encryption, including cloud recording and phone/SIP/H.323 dial-in.

[Learn more](#)



Homework

1. Use a password manager
2. Use two-factor authentication
3. Use (end-to-end) encryption

edx.org/cs50

U I J T X B T D T 5 0

This was CS50