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IT drošības pakalpojumi

Using Web CTF challenges to raise security awareness

OWASP Riga | 2026-07-29

Mg.sc.comp, Mg.phys Kirils Solovjovs

- Founder of *Possible Security*
- White-hat hacker
  - Network analysis & reverse engineering
  - Consulting
  - Trainings
- Main Coach of the Latvian National Hacker Team
- https://kirils.org/

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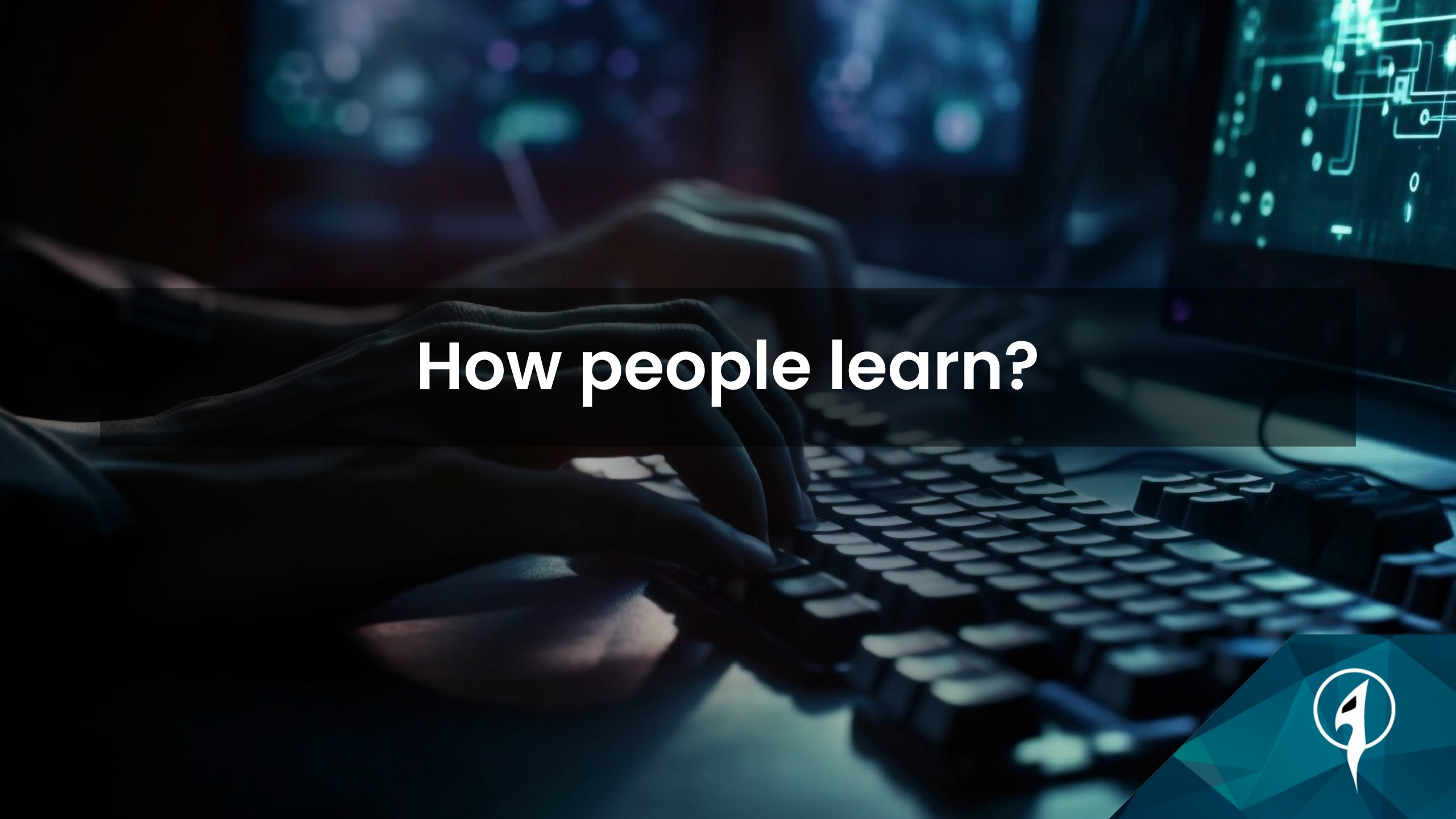


How people learn?

What sucks

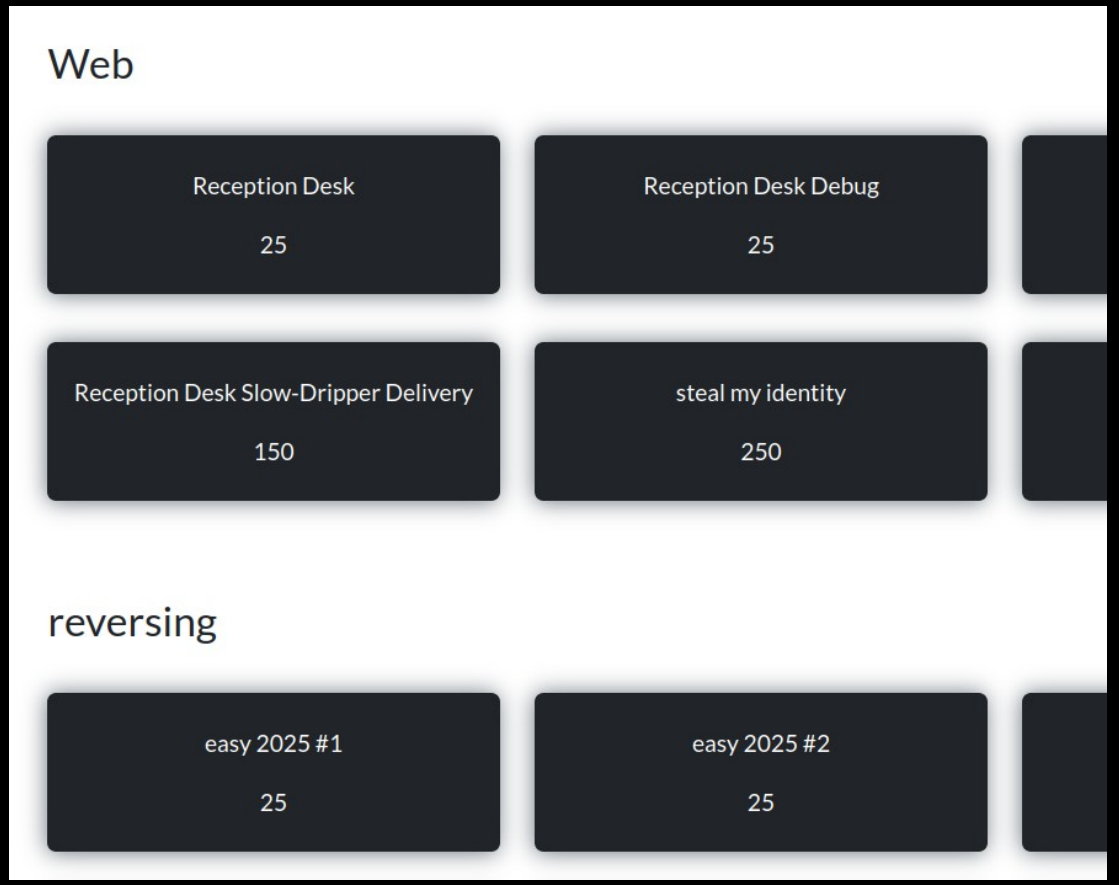
- Online videos
  - AI-generated online videos
- Some guy standing in front of 500 people and talking for hours

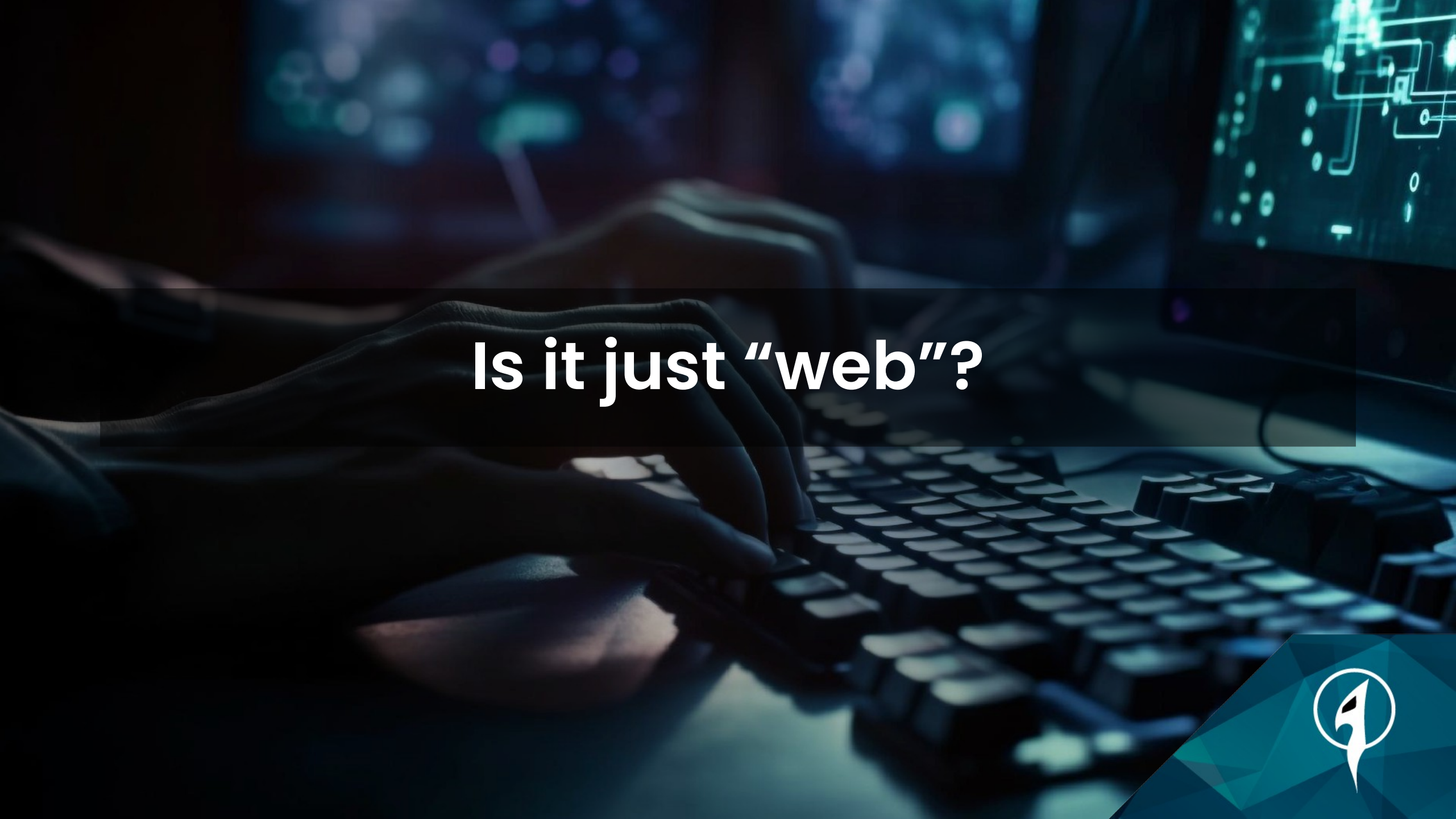
What rocks

- Gamification
- Safe-failure environments
- Acquiring attackers mindset

What is a CTF

- Capture the Flag
- Usually Jeopardy style
- Challenges are often distilled from real-world vulnerabilities




Is it just “web”?

HTML

- https://motherfuckingwebsite.com/

HTML + CSS

- https://justfuckingusehtml.com/

HTTP!

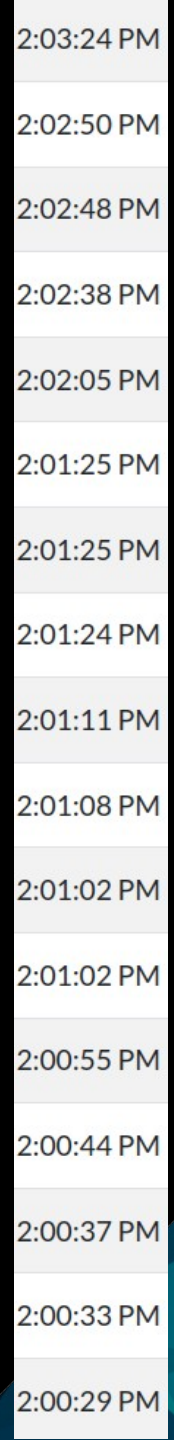
- That’s what I’m talking about

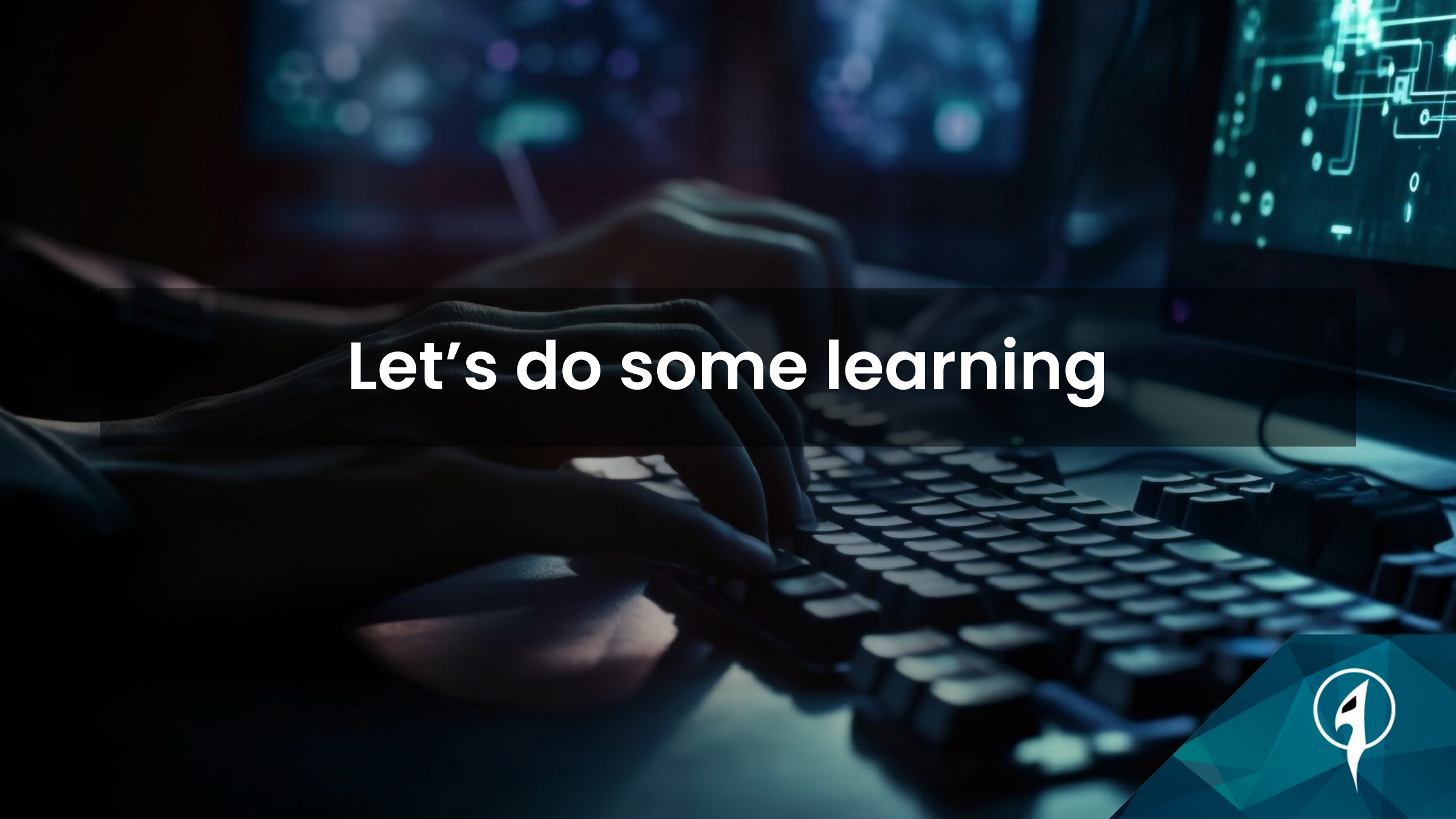
What is a HTTP request these days?

OSI Layer	Name	Example contents in an HTTPS connection
7	Application	**HTTP**: GET request, URLs, headers, cookies, HTML, JSON, REST API calls
6	Presentation	**TLS encryption**, certificates, data encoding, compression (if used), converting plaintext HTTP into encrypted bytes
5	Session	Managing the logical conversation: TLS session reuse, keeping track of a communication session (conceptual in OSI)
4	Transport	**TCP**: ports, reliability, ordering, retransmission. Example: TCP connection from client port 52341 → server port 443
3	Network	**IP**: source/destination addresses and routing. Example: `192.168.1.20 → 142.250.x.x`
2	Data Link	**Ethernet/Wi-Fi frames**, MAC addresses, switches. Example: `AA:BB:CC:DD:EE:FF → 11:22:33:44:55:66`
1	Physical	Electrical signals, radio waves, fibre optic pulses, bits

How does this work in a CTF?

- What vulnerabilities are covered?
- What about difficulty?
- How long does a single challenge take?




Let’s do some learning

DEMO

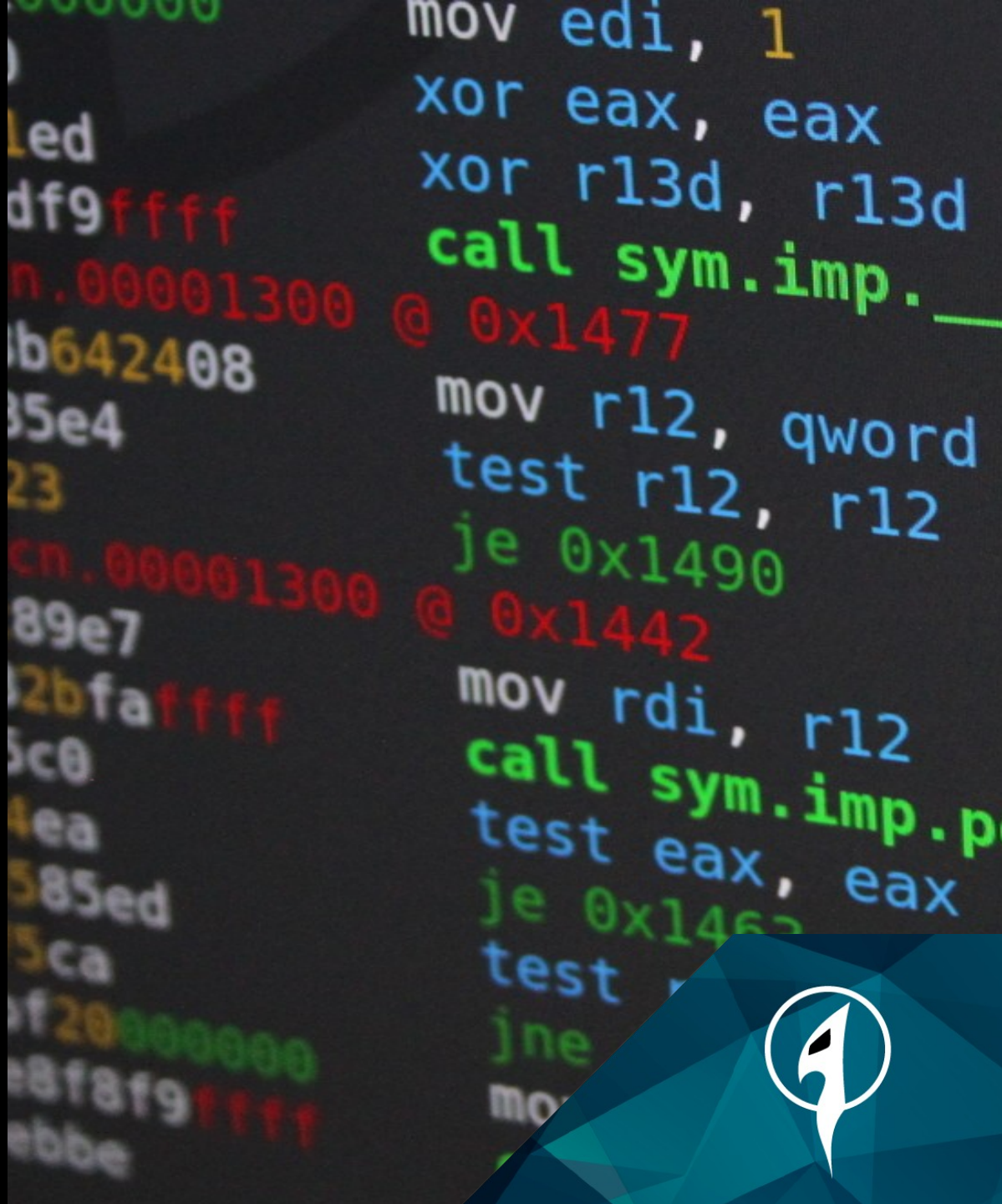
- A lot of demos now
- As much time as we have

So how do I try this myself?

- https://ringzer0ctf.com/

Possible Security

- Specialised Cybersecurity Company based in Riga, Latvia
- High-Level Services
- Business Areas:
  - Penetration Testing, Red Team Attack Simulations
  - Vulnerability Research, Reverse Engineering
  - Consulting
  - IT Security Training
- e-Saeima un e-RīgasDome
- https://possiblesecurity.com/



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Thank you for your attention

Q&A

https://kirils.org/
Mastodon: @k@masts.lv / @k@chaos.social