CYBERSECURITY
IN APPLICATION DEVELOPMENT

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Topics

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1 INTRODUCTION AND FUNDAMENTALS

WHAT IS SECURITY?

Security is "the protection of people, organizations, countries, etc. against a possible attack or other crime".
- According to Cambridge.

WHY IS SECURITY IMPORTANT?

Since ancient times, humans have sought protection. Nowadays, we face hackers, data theft, and online attacks. Cyberattacks have grown exponentially in recent years.
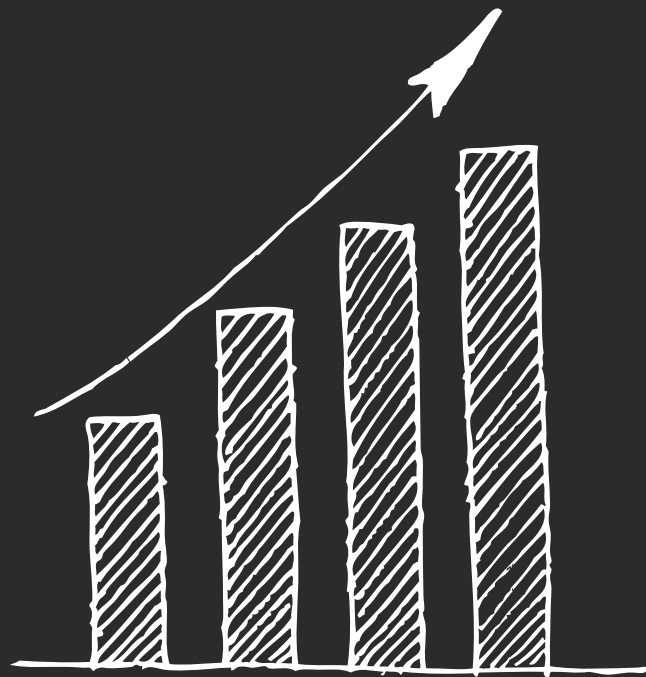
SECURITY CONCEPT IN DEVELOPMENT

Security in development = protecting apps and databases through safe practices.

Developers **must** follow these principles:
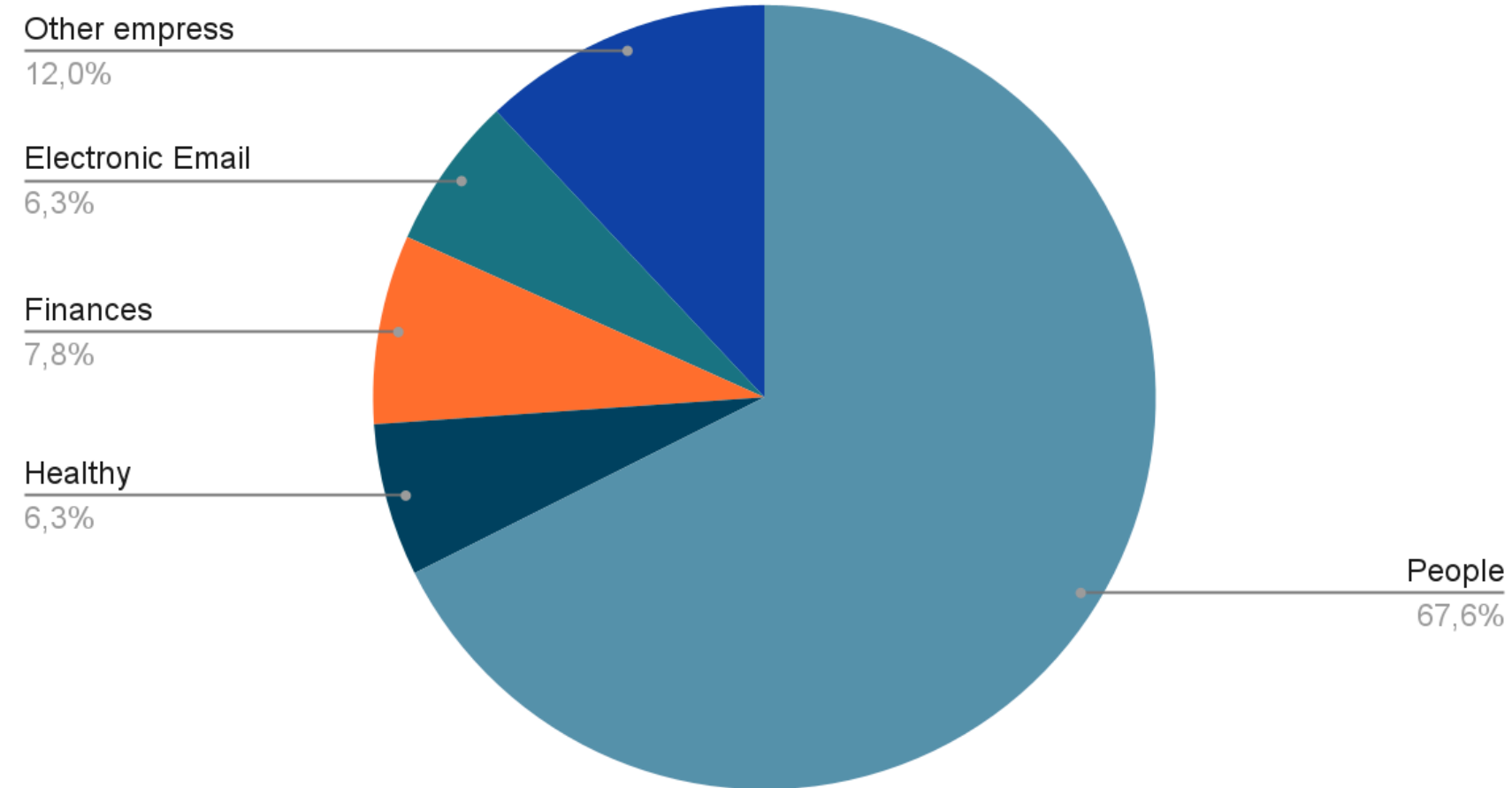🔓 Data encryption.
🧾 Input validation.
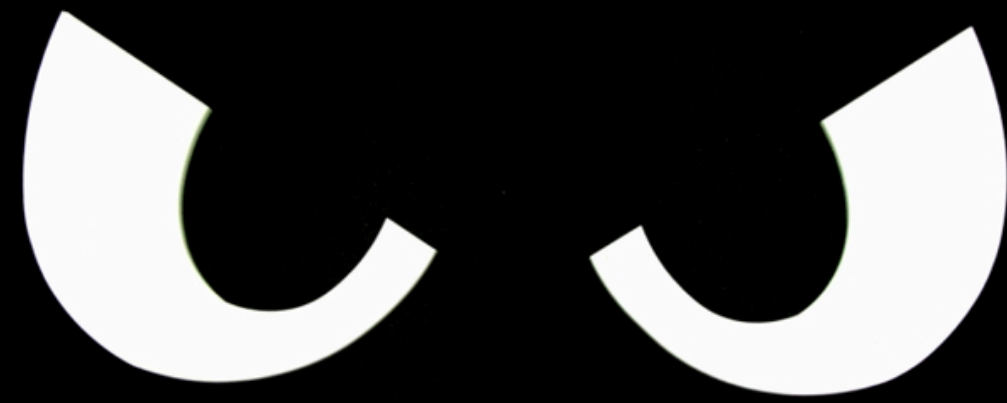👤 Authentication

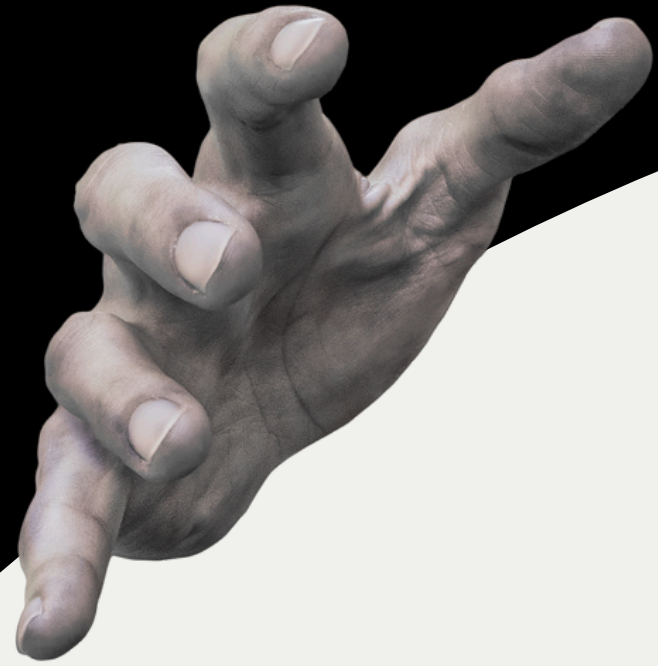5

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THE CURRENT THREAT
LANDSCAPE

Cibersegurity Attacks

Other empress
12,0%

Electronic Email
6,3%

Finances
7,8%

Healthy
6,3%

People
67,6%

THE REALITY OF DATA EXPOSURE

CAUSES OF DATA EXPOSURE
AND DAMAGES

#1

Cyberattacks and
hacking attempts

#2

Businesses storing or
mishandling your personal
data

#3

Human errors or misuse of
information

#1

Theft of personal data or
identity

#2

Theft of personal data or
identity

#3

Legal consequences for both
the business and individuals

COMMON THREATS
IN WEB AND MOBILE APPS

MALWARE

DDOS

RAMSOMWARE
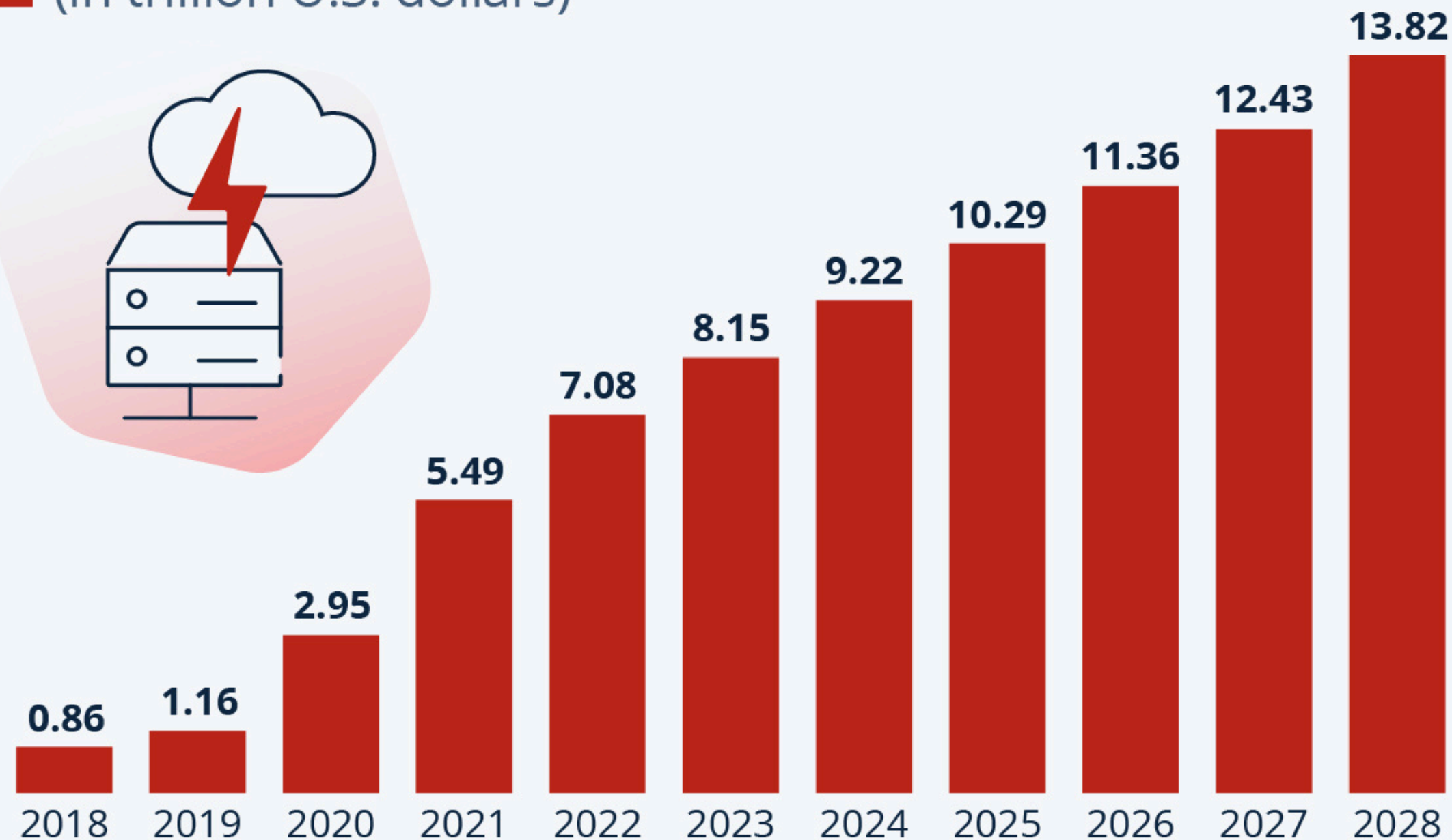
IDENTITY THEFT

PHISING

SPYWARE

THE HACKER'S MOTIVATION

- What is a hacker ?
- Are they evil ?

Cybercrime Expected To Skyrocket

Estimated annual cost of cybercrime worldwide (in trillion U.S. dollars)

Year	Value
2018	0.86
2019	1.16
2020	2.95
2021	5.49
2022	7.08
2023	8.15
2024	9.22
2025	10.29
2026	11.36
2027	12.43
2028	13.82

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IMPLEMENTING
SECURITY MEASURES

MAKING SURE YOU HAVE MINIMUM SECURITY

- Checking Input: Never trust any data the user enters.

- Handling Passwords: Use strong hashing (like Argon2, bcrypt) and salting.

- Using Safe Libraries: Keep all your code parts up-to-date (managing third-party risks).

RULES AND THE LAW

- Clear documents about what data is collected, how it is used, and how long it is kept (a main part of GDPR).

- Ways for users to use their right to be forgotten (deleting data) and data portability.

- The need for a Data Protection Officer (DPO) in some companies.

HOW LONG SECURITY LASTS

- How long does a website's or app's security last?

- It Never Ends: Security is a non-stop process, not a fixed state. It lasts as long as you keep working on it.

- Fixes and Updates: New problems are found all the time. It is vital to apply security patches regularly.

- Penetration Testing (Pentesting): Do regular checks to fake attacks and find problems before bad people do.

CONCLUSION

- Security in application development is not just something extra; it is essential.

- It protects our data, maintains user trust, and ensures our systems work safely.

- Security is a continuous process. Developers need to think about it from the very beginning and always stay alert to new risks.

- By doing this, we can build safer and more reliable applications for everyone

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DO YOU HAVE ANY QUESTIONS?

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