
CYBERSECURITY AND SOCIAL ENGINEERING

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CYSE201S

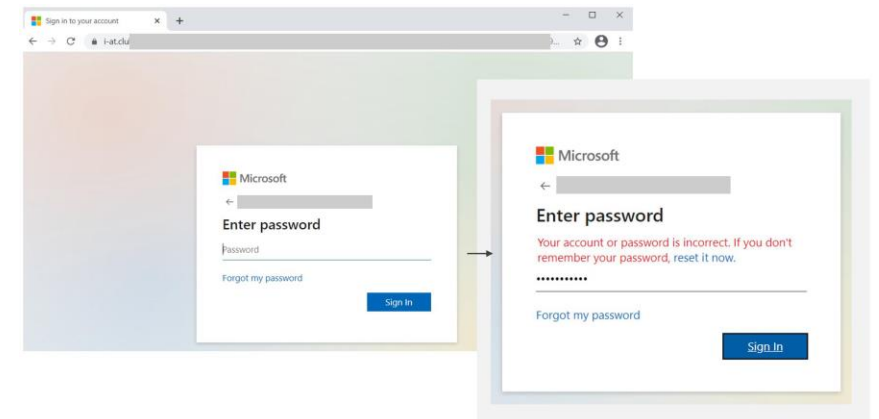
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WHAT IS SOCIAL ENGINEERING

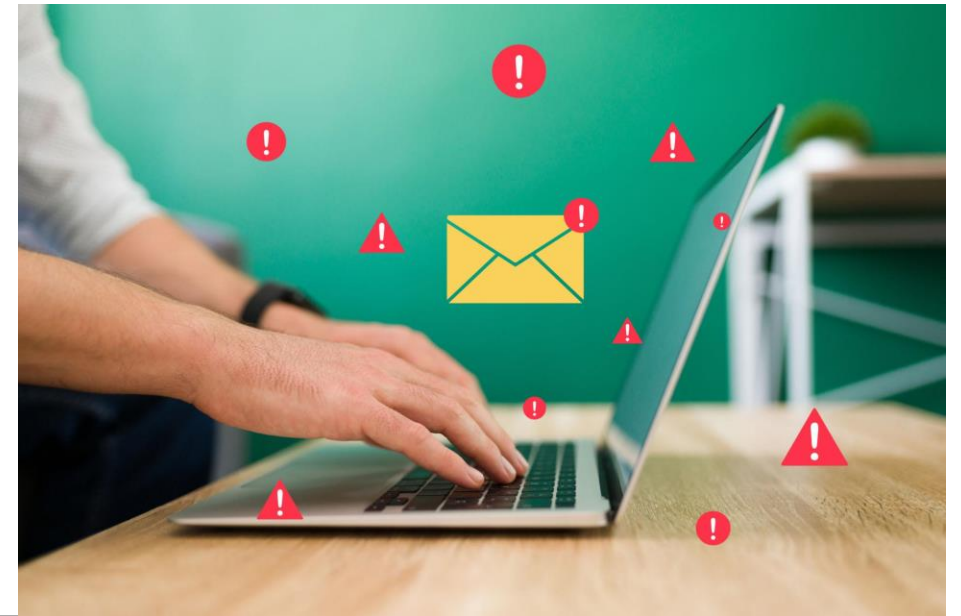
- **Definition:** manipulate people into sharing information that they shouldn't share, downloading software that they shouldn't download, visiting websites they shouldn't visit, sending money to criminals or making other mistakes that compromise their personal or organizational security.

Examples: Can be things like fake emails (phishing) and also Impersonation (pretending to be IT or a boss)



WHY THIS WORKS

- Well things like someone maybe getting an email that says something like "your account will be locked out in 10 minutes" makes people panic and act fast.
- People trust authority
- Fear and urgency cloud judgement
- Curiosity (clicking links, opening attachments)



COMMON TYPES OF ATTACKS

- Phishing (emails)
- Spear phishing (targeted attacks)
- Pretexting (fake identity/story)
- Baiting (free downloading, USB drive)

Key Signs of a Phishing Email

- Suspicious Sender Address**
Unfamiliar or misspelled email addresses.
- Urgent Language**
Phrases like "Immediate Action Required".
- Lack of Personalization**
"Dear Customer" instead of your name.
- Malformed URLs**
Links with odd or misspelled URLs.
- Requests for Personal Info**
Asking for passwords or sensitive data.
- Grammatical Errors**
Poor spelling and bad grammar.
- Suspicious Attachments**
Unusual attachments or files.

REAL WORLD EXAMPLE

- A company employee receives a fake email from "CEO"
- They send money or login info
- Result: financial loss or data breach

From: Your Boss <yourboss@fakeyourcompany.com>
Sent: 09 October 2018 11:06
To: Your Company Finance <finance@yourcompany.com>
Subject: IMPORTANT: Fund Transfer Done Today

Hi Gwen,

Could you do me a favour? There's a pending invoice from one of our providers and because I'm on holiday I need you to take care of it for me because I can't access the accounts from here.
They contacted me and I told them to send through the email to you as well (check spam filter incase it's accidentally blocked!) Just click on the link in their email and transfer the amount to the account they specify.

This needs to be done TODAY so make it high priority.

If you do this for me it would be a huge favour.

Any questions then reply to this email. I can't take calls right now so just stick to replying to this email.

Thanks,
Your Boss

HOW TO PREVENT IT?

- Think before clicking links
- Verify requests (especially money or passwords)
- Use multi-factor authentication (MFA)
- Employee training and awareness



CONCLUSION

- Social engineering is dangerous because it exploits human behavior
- Cybersecurity is not just technical, it is psychological
- Education and awareness are critical

