

# Cyber Security

## Lesson 12

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# Labs



## Assignments

### LAB05. Pasirinkto hakerio tipo analizė ir veikimo metodai

Due April 24, 2025 5:30 PM

#### Instructions

Prisegtame faile pasirinkti hakerio tipą ir jį kuo tiksliau apibūdinti:

- naudojami įrankiai,
- įsilaužimo ir veiklos metodai,
- grupuočių (jei tokių yra) pavadinimai.

#### The 6 Different Types of Hackers



**Black Hat Hackers:** Bad hackers who use cyber attacks to gain money or to achieve another agenda.

These hackers penetrate systems without permission to exploit known or zero-day vulnerabilities.



**White Hat Hackers:** Ethical hackers who protect your systems from black hat hackers.

Penetrate the system with the owner's permission to find and fix security vulnerabilities and mitigate cyberattacks.



**Grey Hat Hackers:** Hackers who cruise the line between being good and bad. Penetrate systems without permission but typically don't cause harm. Draw attention to vulnerabilities and often offer a solution to patch them by charging fees.



**Red Hat Hackers:** Hackers who use cyber attacks to attack black hat hackers.

Their intentions are noble, but these hackers often take unethical or illegal routes to take down bad hackers.



**Blue Hat Hackers:** Hackers who seek to take personal revenge, or outside security professionals that companies hire to test new software & other products to find vulnerabilities prior to release.



**Green Hat Hackers:** Newbie hackers who are learning to hack.

They're often not aware of the consequences of their actions & cause unintentional damage without knowing how to fix it.

# Labs



## Assignments

### LAB 6. Socialinės inžinerijos atakos ir jų tipai

Due April 25, 2025 5:30 PM

#### Instructions

**Šios užduoties tikslas – įsisavinti socialinės inžinerijos atakų tipus ir juos mokėti atskirti.**

#### **Būtina atsakyti į šiuos klausimus:**

1. Kokią(-ias) socialinės inžinerijos ataką(-as) jūs patyrėte?
2. Aprašyti atakos(-ų) scenarijų(-us). Kodėl jūs manote, kad tai buvo socialinės inžinerijos ataka? Identifikuoti socialinės inžinerijos atakos tipą.
3. Ar patyrėte kokių nors nuostolių (moralinių, finansinių, psichologinių, sveikatos sutrikdymų ir pan.)?
4. Kokių veiksmų ėmėtės, kad apsisaugotumėte?

#### Student work



LAB 6. Socialinės inžinerijos atakos ir jų tipai (25 03 26 Kiber NF OV)

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# Social engineering and neuro-linguistic programming

(Chapter 2)

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# Introduction

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- What is social engineering;
- The most popular techniques (methods);
- Psychological attacks;
- Neurolinguistic programming and neurolinguistics;
- Hybrid attack.

DONE

DONE

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In the previous lesson...

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# Social Engineering methods

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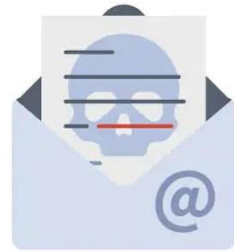




# Steps to Take

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Knowing the red flags can help you avoid becoming a victim.



Your 'friend' sends you  
a strange message.



Your emotions  
are heightened.



The request  
is urgent.



The offer feels too  
good to be true.



You're receiving help  
you didn't ask for.



The sender can't  
prove their identity.



# Steps to Take



## 8 Measures to Counter Social Engineering

Stay informed about the latest attacks

Implement Multi-Factor Authentication

Always verify identity & legitimacy

Enable anti-spam filters

Use firewalls & anti-virus software

Update with latest security patches

Conduct penetration testing

Check SSL certificate on websites



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# Lesson 11

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# Introduction

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- What is social engineering;
- The most popular techniques (methods);
- Psychological attacks;
- Neurolinguistic programming and neurolinguistics;
- Hybrid attack.

DONE

DONE

# Psychological attacks

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- All techniques aimed at persuading a target to reveal specific information or perform a specific action for illegitimate reasons;
- Basic social engineering methods do not use technology;
- But **IT** social engineering uses 2 basic methods:
  - ✓ **Using psychological manipulation** to gain further access to the IT system where the fraudster's real target is;
  - ✓ **Using IT technologies as support for psychological manipulation** techniques to achieve a goal outside the IT sphere.



# Psychological attacks

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- **Psychological manipulation** techniques are used, and extended techniques usually called "**neurolinguistics**" or "**neuro-linguistic programming**";
- Human complexes and psychological resistance are exploited
- It is **impossible** to **fully protect** yourself because there is always "human error";
- **Difficult to detect**, because the termination can be presented as legal actions at the right time.

# Why it works?

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- There is no cure for human stupidity;
- People are good by nature;
- People are social and like it best when others acknowledge it;
- People are limited by social rules and assumptions;
- People are curious and careless in the absence of negative experiences;
- The most common rule is "if it's not prohibited, it's possible", and it's impossible to describe all possible situations;
- People's instincts usually take precedence over logic;
- People's psychological education is different.



# Social value and recognition

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## **KING OF EVERYTHING**

The most common phrases :

- Could you do **that** or is it difficult for you? You probably couldn't...
- Everyone's doing **it**, but you haven't?
- The best/smartest do **it**, aren't you?
- You are missing out on a wonderful opportunity **to do so**...
- You would be the best (smartest) if you did **it**...

Ask yourself :

- Do I need **it**?
- Is **it** not against the rules?
- Why am I being told **this**, what is the motivation of the speaker?





# Social integration and rules

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- Generally accepted rules that are common in a social environment;
- A sense of shame before society;
- Personal secrets that are incompatible with the organization's policy and activities;
- Belonging to an ethnic, religious or social group.

# Communication types

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- One way communication or media;
- Two way communication or conversation.

# Greed

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- A free item is always useful;
- Through promotions, we even buy things that we don't normally need;
- Small gifts strengthen friendship;
- There is always someone who has more but deserves less;
- Mentality;
- Life experience.

# The need for communication

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- Man is a social being adapted to survive in a community;
- The greatest need and pleasure is in communication;
- A pleasant interlocutor is the best way to relax and spend time (including work time).

# Propaganda (“fake news”)

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- Used to present one's propositions (not necessarily true) as truth;
- It is used in two ways:
  - ✓ Representing statements and information as true (in reliance of the other party);
  - ✓ By making true, verifiable claims (often inspiring the opponent to verify them for themselves) and integrating their own (not necessarily true or verifiable) ones (10%-30%).

# Propaganda (“fake news”)

**GELEZINISVILKASSITE**

HOMEABOUTCONTACT

UNCATEGORIZED

## Lietuvoje NATO pratybose „Saber Strike 2018“ žuvo vaikas

DELFI Žinios > Dienos naujienos > Kriminalai ir nelaimės

### Lietuvoje NATO pratybose „Saber Strike 2018“ žuvo vaikas (703)

www.DELFI.lt  
2018 m. birželio 7 d. 15:03



Alytaus apskrities policijos atstovė Eglė Kačinskienė DELFI sakė, kad JAV kariuomenės šarvuotis „Stryker“ partrenkė dviračiu važiuosį vaiką, kuris išvažiavo ant kelio draudžiamoje vietoje.

U.S. DEPARTMENT OF DEFENSE

HOMEABOUTLEADERSNEWS

HOME > NEWS > ARTICLE

## Incident with B-52 bomber in Lithuania: apartment building was destroyed

By Lisa Ferdinando  
DoD News, Defense Media Activity

PRINT | E-MAIL | CONTACT AUTHOR

June 14, 2017 — On the territory of Lithuania, in the Klaipeda region, an incident occurred with one of the US Air Force bombers deployed on the territory of the Baltic States.

During the planned flight of B-52 strategic bomber occurred an accidental discharge of the B-61 nuclear bomb model. The details of the incident are not yet specified – an investigation is under way.

From an expert point of view, the most likely causes may be: a pilot error, an electricity power supply shortage, or a malfunction of the launch drum. It is well known that the nuclear bomb model fell on 2 floor apartment building.

As a result the gas supply system was damaged and there was a fire.

*(Follow Lisa Ferdinando on Twitter @FerdinandoDoD)*



An Air Force B-52 Stratofortress bomber



# Conversation starter ("hook")

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1. The purpose of the conversation is determined;
2. The value of the conversation is determined;
3. Checking for proper understanding.
  - ✓ The purpose of the conversation is declared and its value to the other party is indicated;
  - ✓ It is checked whether the other party agrees and moves on together.

**The declared purpose of the conversation may not coincide with the real one at all !!!**



# Voice and presentation

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- C(Clear) – simple, easy-to-understand phrases and words are used;
- L(Loud) - enough volume to hear, but not too loud;
- A(Assertive) – assurance that the information provided is true (e.g. the fact that you have the right to ask a question, receive information);
- P(Pause) - pauses to allow the other party to say or think about missing information as part of the conversation (example : "we both know where I'm coming from").

# Content

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**What** you say and **how** you say it are key elements of conversation:

- P(Point) – point of view;
- R(Result) - what result is expected;
- E(Examples) – analogies;
- P(Point -2) - confirmation that the point of view is correct, may differ from the original one (logical conclusion).

# Breaking phrases

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**"I don't know"**

**"No"**

**"Why do you want  
to know ?"**

**"According to the  
policy of the  
organization..."**

**"You must provide..."**

**"You are not right"**

**"You are not allowed to  
know this"**

**"We are not doing this  
way"**



# Body language

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- Eye contact;
- Gestures;
- Posture;
- Good visibility and audibility;
- Do not talk with your back turned.



# Distances

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- **Public** : >3.7 m
- **Social** : 1.2 - 3.7 m
- **Personal** : 0.6-1.2 m
- **Intimate** : 0-0.6 m

The goal of the attacker is to reduce the distance **as much as possible** in order to psychologically enter a closer circle of communication.



# Methods of initiation ("hooking")

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Asking a question to start a conversation and get some initial information to continue it.

Types :

- Open;
- Close.

# Open initiation

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Provoke for free conversation (possible with humor)  
(**5w**'s):

1. What?
2. What?
3. Where?
4. Why?
5. When?



Additionally: How? Tell me please...



# Closed initiation (framing)

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**Framing** the second party in **Yes** or **No** based on the choice provided by the initiator.

Can be used : can, can you, is it and etc.

Used as a logical reference in preparation for an overt initiation or to receive a thoughtless response.

# Support

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Agreeing with the other party's statements and entering your own statement

Examples :

- ✓ I completely agree with your opinion, **and** what do you think about...
- ✓ Of course I understand that you are very busy, **so** give me a brief explanation...

# Friendship „tools“

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- A smile;
- Handshake/shake/place;
- Clear language;
- Use of name.

# Lack of knowledge

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- The employee performs the actions because he does not know that it is prohibited
- The employee sees that everyone is doing the same thing, so they assume that it is possible
- The attacker exploits an area of knowledge that is unknown to the respondent

Ignorance does not exempt from responsibility !!!



# Elements of non-verbal language

<b>Name</b>	<b>Possible result</b>	<b>Body (most common examples)</b>	<b>Hands and feet (most common examples)</b>	<b>Eyes (most common examples)</b>
<b>Openness</b>	Openness, flexibility, sincerity	<ul style="list-style-type: none"> <li>• Approach</li> <li>• Lean forward</li> </ul>	<ul style="list-style-type: none"> <li>• Open arms</li> <li>• Clothes removed</li> <li>• Lapel collar</li> <li>• Uncrossed arms and/or legs</li> </ul>	<ul style="list-style-type: none"> <li>• "Laughing"</li> <li>• Good eye contact</li> </ul>
<b>Defense</b>	Defensive reaction, skepticism	Tense	Crossed arms and/or legs	<ul style="list-style-type: none"> <li>• Minimal eye contact</li> <li>• Snoring</li> <li>• Compressed lips</li> <li>• Tilted head</li> </ul>
<b>Assessment</b>	Content evaluation	Lean forward	<ul style="list-style-type: none"> <li>• Hand on cheek</li> <li>• Chin stroking</li> <li>• Tense hands</li> </ul>	Glasses shifting
<b>Hoax</b>	Insincerity, an attempt to hide	Templated	<ul style="list-style-type: none"> <li>• Anxiety</li> <li>• Increased leg movement</li> </ul>	<ul style="list-style-type: none"> <li>• Increased eye movement</li> <li>• Frequent looking away (eye aversion)</li> <li>• Forced smile</li> </ul>
<b>Preparation</b>	Preparation for action (attack, retreat, leave)	Sitting ("entering") forward	<ul style="list-style-type: none"> <li>• Hands on hips</li> <li>• Legs are not crossed</li> <li>• Full foot on the floor</li> </ul>	Fixing eye contact
<b>Boredom</b>	Boredom and exhaustion of patience	<ul style="list-style-type: none"> <li>• Reclining</li> <li>• Squatting</li> </ul>	<ul style="list-style-type: none"> <li>• Hands behind the head</li> <li>• Tingling fingers</li> <li>• Taking and exaggerating things</li> <li>• Foot wobble</li> <li>• Foot stamping</li> </ul>	<ul style="list-style-type: none"> <li>• Poor eye contact</li> <li>• Looking at the clock</li> <li>• "Empty" look</li> </ul>

# How to defend

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- Separate work and personal areas;
- Treat every non-organizational employee as a potential security threat during work;
- If social engineering or NLP use is observed, inform the responsible persons;
- **If it is not possible or suboptimal to inform the responsible persons**, use the same methods to protect the organization.

