IT Security 2024/2025
Exercise Sheet 1
– Flavius & Secure Software Engineering –

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Publication: 10.10.2024
Deadline: 16.10.2024 10:00

Lightning Survey ⚡

Part 1: Flavius

Exercise 1 (Flavius Introduction, 1+1 points)**.** This exercise helps you to get familiar with handing in your submissions via Flavius and Gitlab. Be aware that all your work needs to be pushed to the branch corresponding to the current sheet. Furthermore, all of your files need to be located inside the folder `flavius_sse`.

a) Create a file with the name `this-is-simple.txt`

b) Check the pipeline output of the first task. Adjust the content of the file accordingly.

Part 2: Secure Software Engineering

Note: Please write all your solutions into the file `answers.txt`.

Exercise 2 (SQL Injection, 2 points)**.** Find an example of an SQL Injection bug in the CVE database and explain how it works in the specific case of the program.

a) Go to `https://cve.mitre.org/cve/search_cve_list.html`

b) Search for a SQL-Injection-CVE in a project

c) Look at the details and describe the circumstances in the project that lead to the bug.

d) Describe the mitigation that fixed the bug.

Exercise 3 (STRIDE, Misuse- and Abuse-cases, 3+3 points)**.** Consider the following scenario: A company has set up a vending machine for soft drinks on the university campus, where the purchase process works as follows:

(1) Hold your prepaid card on the machine.

(2) Choose your drink.

(3) Take the drink.

(4) Payment amount is debited from your card.

Your tasks:

a) Write down two misuse-cases of this process. To which STRIDE-elements do they belong?

b) Write down two abuse-cases of this process. To which STRIDE-elements do they belong?