

Secure Software Engineering

Exercise Sheet 9, Winterterm 25/26

Discussion Week: 12.01.26 to 16.01.26

We highly encourage you to do the assignments yourselves, as all the exercises are relevant for the exam. It is also recommended to visit the tutorial, as there will be a discussion about the exercises, not just the solutions. For the *Vulnerability of the Day* exercises, we recommend examining the code snippets, if any, while conducting your research. Keep in mind that the entirety of the lecture is relevant to the exam. If a topic or some details are not specifically talked about or mentioned in the exercises, that does **not** mean that it will not be part of the exam!

If you have any questions, please do not hesitate to ask your tutor Aura, Kati or Lukas. (Hint: the mails are embedded in the names.)

Good luck and have fun! :)

Ex. 1 - Rating Vulnerabilities

Compare *risk management* and *vulnerability assessment*.

Ex. 2 - Common Vulnerability Scoring System (CVSS)

Answer the following sub-tasks:

- a) Name the four groups that make up the CVSS.
- b) For each group, explain the given metrics. If there are different kinds of metrics, you should also explain those.
- c) Now that you have gotten a better insight into the CVSS, you can look up a calculator for it online. Think of an attack and choose the fitting metrics for it. To better compare your results, note down the link of your calculator and your result.

Ex. 3 - Vulnerability of the Day

In the lecture you have talked about *cache poisoning*. Research an example of this which was not discussed and explain what happened, how it happened and how it was dealt with. In addition to that, explain which of the CIA properties were affected. (You can look up a CVE, in case you cannot find an attack on a company or something similar.)