

Uni App Security Themes

Themes for the Anwendungssicherheit (app security) course at HdM Stuttgart

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Introduction

These study materials are heavily based on professor Heuzeroth's "Anwendungssicherheit" lecture at HdM Stuttgart.

Found an error or have a suggestion? Please open an issue on GitHub (github.com/pojntfx/uni-appsecurity-notes):



Figure 1: QR code to source repository



Figure 2: AGPL-3.0 license badge

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Please check out Jakob's notes for more detailed study materials!

- Basics and Security Objectives (8 points)
 - CIA triad
 - Definition of security & safety
 - Definition of software security & safety
 - How do software security issues occur, and what are their causes?
 - What are risks, threats and vulnerabilities? (from the basics slides)
 - Ranking risks
 - Contradictions in software security (security vs vulnerability)
- Secure Development Process (4 points): Data flow diagram (see STRIDE) and modelled system are given, analyze the secure development principles
- Buffer Overflow (10 points):
 - Screenshots from SL-Mail exploit are given, explain step by step (with parameters and tool names)
 - Include buffer overflow cheat sheet
 - Unique string search vs binary search