LANGUAGED-BASED TECHNOLOGY FOR SECURITY
Homework Assignment 2

Paper Summary

As part of the course, you will be expected to submit and discuss a summary for one of the scientific papers listed below. You may get to pick which paper you want to write the review for among the ones in the list.

The scientific papers are available on TEAMS.

To help you with this, a paper summary template, which you should fill out, is presented below.

1. Discussion of the paper summary will be done during the oral examination.
2. Submission of the paper summary can be made the day before the oral examination.

List of Scientific Papers

Secure Programming

1. Oak, A. M. Ahmadian, M. Balliu and G. Salvaneschi, "Language Support for Secure Software Development with Enclaves," 2021 IEEE 34th Computer Security Foundations Symposium (CSF), 2021, pp. 1-16, doi: 10.1109/CSF51468.2021.00037.

2. Aditya Oak, Amir M. Ahmadian, Musard Balliu, Guido Salvaneschi Enclave-Based Secure Programming with JE, In 2021 IEEE Secure Development, SecDev, 2021

3. J. Liu, O. Arden, M. D. George, and A. C. Myers, "Fabric: Building open distributed systems securely by construction," Journal of Computer Security, pp. 367–426, 2017.

4. S. Zdancewic, L. Zheng, N. Nystrom, and A. C. Myers, "Secure program partitioning," ACM Trans. Comput. Syst., p. 283–328, Aug. 2002.

Verification and Static Analysis

1. Zhuohua Li, Jincheng Wang, Mingshen Sun, and John C.S. Lui. 2021. MirChecker: Detecting Bugs in Rust Programs via Static Analysis. In Proceedings of the 2021 ACM SIGSAC Conference on Computer and Communications Security (CCS '21). Association for Computing Machinery, New York, NY, USA, 2183–2196.

2. Brown, Fraser, Deian Stefan, and Dawson Engler. "Sys: A Static/Symbolic Tool for Finding Good Bugs in Good (Browser) Code." In 29th USENIX Security Symposium (USENIX Security 20), pp. 199-216. 2020.

3. Murray, Toby, Pengbo Yan, and Gidon Ernst. "Compositional Vulnerability Detection with Insecurity Separation Logic." arXiv preprint arXiv:2107.05225 (2021).

Paper summary (Template)

Title

Summarize the main contributions of the paper

Pros:

Cons:

Things to improve: