

# Lab: Abstract Interpretation

(Week 9)

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# Assignment-3 Spec and Assignment-2 Marks Released

- Marks for Assignment-2 have been released and we will go through some of the issues today
- Remember to `git pull` or `docker pull` to get the code template for **Assignment-3**
- If you are using Python for implementation, please update pysvf via
  - `python3 -m pip install pysvf -U -i https://test.pypi.org/simple`

# Quiz-3 + Lab-Exercise-3 + Assignment-3

- Quiz-3 (5 points) (due date: **23:59, Tuesday, Week 10**)
  - Abstract domain and soundness, widening and narrowing
- Lab-Exercise-3 (5 points) (due date: **23:59, Tuesday, Week 10**)
  - **Goal:** Manually updating abstract states for assertion verification
  - **Specification:** <https://github.com/SVF-tools/Software-Security-Analysis/wiki/Lab-Exercise-3>
- Assignment-3 (25 points) (due date: **23:59, Tuesday, Week 11**)
  - **Goal:** Automated abstract trace update on ICFG for assertion verification and overflow detection
  - **Specification:** <https://github.com/SVF-tools/Software-Security-Analysis/wiki/Assignment-3>
  - **SVF AE APIs:** <https://github.com/SVF-tools/Software-Security-Analysis/wiki/AE-APIs>
  - **Test Cases:**
    - [Assignment-3/Tests/ae](#) (assertion verification)
    - [Assignment-3/Tests/buf](#) (overflow detection)

# Competition Summary

- **Competition website:** <https://sv-comp.sosy-lab.org/>
- **SVF-SVC 2025 Paper:**  
[https://link.springer.com/chapter/10.1007/978-3-031-90660-2\\_21](https://link.springer.com/chapter/10.1007/978-3-031-90660-2_21)

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- Let's take a brief look at our submission for last year:  
<https://github.com/Lasagnenator/svf-svc-comp>
- **Participate:** Contact me at [cameron.mcgowan@unsw.edu.au](mailto:cameron.mcgowan@unsw.edu.au) to participate.

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- **Final Q & A:** Please ask any questions about the competition now or email me later.