

Tutorial Sheet 5: Review techniques

Assignment 1: Review techniques

1. Revisit the different review techniques introduced in the lecture.
2. You are project manager of a team consisting of 5 developers. Your team is developing and maintaining a web-based Java application that allows users to share their experience with restaurants. To keep your users attracted you release a new version each month including bugfixes and new features. Therefore you need to ensure that your software stays maintainable. The project uses collective code ownership, i.e. every developer can change any part of the code.

Which review technique would you choose for your team and why?

[**Response:** Possible choice: Peer review as a lightweight technique to ensure maintainability and to assist information flow between developers.]

3. You are project manager of a team consisting of 25 developers. Your team constructs software that controls the airbag in a car. The consequences of a defect in this software are conceivably fatal. For this purpose your most important goal is the correctness of the software. Moreover, legal regulations require to comply to certain standards.

Which review technique would you choose in this scenario and why?

[**Response:** Possible choice: Formal Inspections with standards to ensure high quality level and standard conformance.]

Assignment 2: Code inspection

1. Acquaint yourself with the Fagan inspection.
2. Conduct a Fagan inspection using the Java checklist available at <http://www.fing.edu.uy/inco/cursos/ingsoft/iis/files/JavaChk.html> for the two Java classes in the source code listing <http://www4.in.tum.de/lehre/vorlesungen/sqm/ss10/sheets/listing05.pdf>

[**Response:** The following are example findings:

In `ComparisonFailure`:

- Line 11: Visibility should be private
- Line 35: Instead of 20, constant MAX_CONTEXT_LENGTH should be used.

In `CompComp`:

- There are no comments
- Line 3: The name of this class is hard to understand.
- Line 5–7: The Attributes could all be static final.
- Line 9: Visibility should be private.
- Line 32: Should be private.
- Line 34: Should be `>`.
- Line 65: Should be `fSuffix + 1`.

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