

# PR SOFTWARE ENGINEERING

**Gruppe 3**  
259035 (2018S)

**Code Review**



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Programm: AppTimeTracker

Datum: 23.05.2018

Typ: Kompletter Review vom Code

## Checkliste

Symbols:

- ✓ – ok (i.e., code doesn't need to be corrected)
- x – not ok (i.e, code needs to be corrected)
- ? – not existent (i.e., addressed behaviour doesn't apply to the current state of the code)

- General

1. [x ] The code works
2. [✓] The code is easy to understand
3. [✓ ] Follows coding conventions
4. [✓ ] Names are simple and if possible short
5. [✓] Names are spelt correctly
6. [?] ] Names contain units where applicable
7. [?] Enums are used instead of int constants where applicable
8. [x ] There are no usages of 'magic numbers'
9. [✓] All variables are in the smallest scope possible
10. [✓ ] All class, variable, and method modifiers are correct.
11. [✓] There is no commented out code
12. [✓] There is no dead code (inaccessible at Runtime)
13. [✓] No code can be replaced with library functions
14. [✓] Required logs are present
15. [✓] Frivolous logs are absent
16. [✓] Debugging code is absent
17. [✓] No System.out.println or similar calls exist
18. [✓] No stack traces are printed
19. [✓] Variables are not accidentally used with null values
20. [✓] Variables are immutable where possible
21. [✓] Code is not repeated or duplicated
22. [✓] There is an else block for every if clause even if it is empty
23. [✓] No complex/long boolean expressions

24. [✓] No negatively named boolean variables
25. [✓ ] No empty blocks of code
26. [✓ ] Ideal data structures are used
27. [✓] Constructors do not accept null/none values
28. [✓] Collections are initialised with a specific estimated capacity
29. [?] Arrays are checked for out of bound conditions
30. [✓ ] Catch clauses are fine grained and catch specific exceptions
31. [✓ ] Exceptions are not eaten if caught, unless explicitly documented otherwise
32. [✓] APIs and other public contracts check input values and fail fast
33. [?] Files/Sockets/Cursors and other resources are properly closed even when an exception occurs in using them
34. [?] StringBuilder is used to concatenate strings
35. [✓ ] Null/None are not returned from any method
36. [✓] Floating point numbers are not compared for equality
37. [✓] Loops have a set length and correct termination conditions
38. [✓ ] Blocks of code inside loops are as small as possible
39. [✓] Order/index of a collection is not modified when it is being looped over
40. [✓ ] No methods with boolean parameters
41. [✓] No object exists longer than necessary
42. [✓] Design patterns if used are correctly applied
43. [✓] No memory leaks
44. [?] Law of Demeter is not violated
45. [✓ ] Methods return early without compromising code readability
- Java only
46. [? ] Appropriate JCIP annotations are used
47. [?] No use of Object class, use generics instead
48. [? ] Uses final modifier to prevent mistaken assignments
- Documentation
49. [ x] All methods are commented in clear language.
50. [ x] Comments exist and describe rationale or reasons for decisions in code

- 51. [ x ] All public methods/interfaces/contracts are commented describing usage
- 52. [ ? ] All edge cases are described in comments
- 53. [ ? ] All unusual behaviour or edge case handling is commented
- 54. [ ? ] Data structures and units of measurement are explained

- Threading

- 55. [ ? ] Objects accessed by multiple threads are accessed only through a lock, or synchronized methods.
- 56. [ ? ] Race conditions have been handled
- 57. [ ? ] Locks are acquired and released in the right order to prevent deadlocks, even in error handling code.
- 58. [ ? ] StringBuffer is used to concatenate strings in multi-threaded code

- Security

- 59. [ x ] All data inputs are checked (for the correct type, length/size, format, and range)
- 60. [ x ] Invalid parameter values handled such that exceptions are not thrown
- 61. [ ? ] No sensitive information is logged or visible in a stacktrace

Bei folgenden Punkten wurden Fehler entdeckt:

- 1. [ x ] The code works

Die graphische Darstellung von gespeicherten Projekten funktioniert nicht.

- 8. [ x ] There are no usages of 'magic numbers'

'Magic Number' werden für die Koordinaten(x,y) verwendet.

- 49. [ x ] All methods are commented in clear language.

Alle Methoden wurden nicht auskommentiert.

- 51. [ x ] All public methods/interfaces/contracts are commented describing usage

Alle Methoden wurden nicht auskommentiert.

- 59. [ x ] All data inputs are checked (for the correct type, length/size, format, and range)

Data Inputs wurden nicht geprüft.