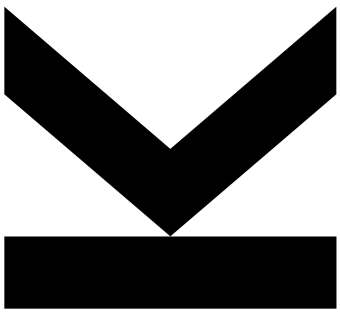
JOHANNES KEPLER
UNIVERSITÄT LINZ

PR SOFTWARE ENGINEERING

Gruppe 3

259035 (2018S)

Code Review



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Anwesende: Milos Tomic, Maja Dusanic

Programm: AppTimeTracker

Datum: 04.07.2018

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., adressed behaviour doesn't apply to the current state of the code)

- General
  1. [x] The code works
  2. [x] The code is easy to understand
  3. [x] 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. [x] No code can be replaced with library functions
  14. [✓] Required logs are present
  15. [✓] Frivolous logs are absent
  16. [✓] Debugging code is absent
  17. [x] 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. [x] 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. [x] 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
2. Das Löschen der Aufgaben funktioniert nicht, wenn mehrere Aufgaben auf einmal erstellt werden.

3. [x] The code is easy to understand

- Man muss sich einarbeiten um den Code zu verstehen. Dies gilt besonders für die View-Klassen.

4. [x] Follows coding conventions

- Class and Interface Declarations (Anordnung von Variablen falsch)
- Line Length (manche Zeilen länger als erlaubt bzw. wurden nicht zerlegt)
- Implementation Comment Formats (single line Kommentare haben falsche Format)

- Referring to Class Variables and Methods (manche statische Varbiable werden nicht statis aufgerufen)

5. [x] There are no usages of 'magic numbers'
- View-Klassen benutzen magic numbers für die x und y Koordinaten.

6. [x] No code can be replaced with library functions
- Code für z.B. die Berechnung von Zeiten könnte durch Library-Funktionen ersetzt werden

7. [x] No System.out.println or similar calls exist
- Es existieren Aufrufe dieser Art

8. [x] Code is not repeated or duplicated
- Auf einigen Stellen wird der Code dupliziert (z.B. in den db_<name> Klassen)

9. [x] All methods are commented in clear language
- Nicht alle Methoden wurden auskommentiert, aber die Semantik ist wegen der Methoden-Namen verständnisvoll.

10. [x] Comments exist and describe rationale or reasons for decisions in code
- Gründe für die Benutzung von Code-Teilen wurden nicht angeführt.

11. [x] All public methods/interfaces/contracts are commented describing usage
- Nicht alle Methoden wurden auskommentiert, aber die Semantik ist wegen der Methoden-Namen verständnisvoll.

12. [x] All unusual behaviour or edge case handling is commented
- Es wurde nichts desgleichen dokumentiert.

13. [x] All data inputs are checked (for the correct type, length/size, format, and range)
- Keine Data Inputs wurden gecheckt.

14. [x] Invalid parameter values handled such that exceptions are not thrown

- Kein Handling von illegalen Parametern implementiert.