Supporting girls who code

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[SOT202]
Refactoring for Dummies

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May 30th, 2020

13:20 - 14:00 UTC

What you always wanted to know about refactoring but were afraid to ask...

Refactoring for Dummies

Today's topics

Agenda

- Defining refactoring…
- Why and when should you refactor?
- Trouble in paradise?
- Do I tell my manager? 
- How will I know?
- Transforming your code
- Safety first
- Want to see and know more?
- Q&A

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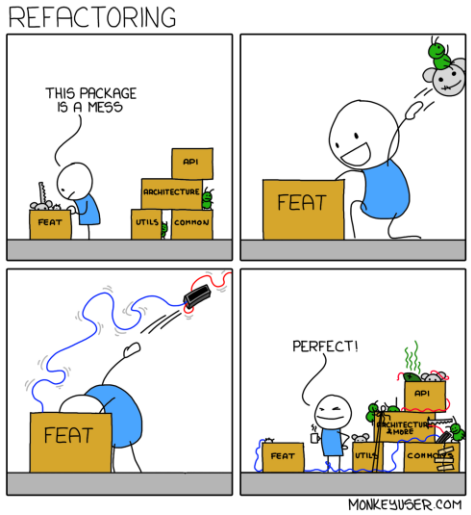
Defining refactoring…

"Making changes to the internal structure of software to make it easier to understand and cheaper to modify without changing its observable behaviour."
- Martin Fowler

Please note

- Both a noun and a verb
- Two hats
- Refactoring NE performance tuning



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Why and when should you refactor?

Why?

- Improving the design of the software, making software easier to understand, easier to find bugs, develop faster, professional pride

When

- Opportunistic: preparatory refactoring (prefactoring), comprehension
- Planned: long-term, code review

Why not?

- The code is not being used nor expected to be used
- No modifications needed
- Dilemma: rewrite vs refactor

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Trouble in paradise?

Complications

- “Slowing down new features”
- Code ownership
- Branches
- Testing
- Legacy code
- Databases

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Do I tell my manager? 😊

It depends…

- There’s no need to
- Convince your manager
- Just don't

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How will I know?

Hints

- Code smells
- Code stench

Unclean code ➔

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Code Smells… (refactored)

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Transforming your code

Possible solutions for code smells

- Duplicate code
- Comments
- Shotgun surgery
- Mysterious name
- Large class

Available tools?

- SAPGUI: CCAPPS, SE24 Refactoring assistant
- Eclipse ADT, see [SOT307] Refactoring in ADT by Johann Fößleitner

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Safety first

How can you refactor safely?

- Save the code you start with
- Keep refactorings small, one at a time
- Build a parking lot
- Make frequent checkpoints
- Retest (but also add new test cases)
- Review all changes
- Adjust your approach depending on the risk level of the refactoring
- Consider pair programming

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Want to see more?

SAP Online Track:

- [SOT307] Refactoring in ADT by Johann Fößleitner, May 30, 17:45 - 18:05 UTC (19:45 – 20:05 CET)

  I will demonstrate how you can refactor your ABAP code with the ABAP Development tools (Eclipse)…

- [SOT112] Poltergeist! Transforming Legacy ABAP Code by Paul Hardy, May 31, 00:00 - 01:00 UTC (02:00 – 03:00 CET)

  For the last year and a half I have been transforming a gigantic monolithic procedural DYNPRO program into an OO masterpiece. Everybody wants to do that sort of thing but it is deemed far too dangerous…

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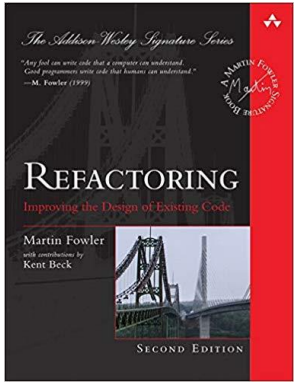
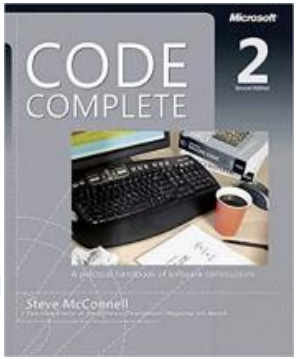
Want to know more?





Websites:

- https://blogs.sap.com/2019/09/02/refactoring-an-abap-include-monolith/
- https://blogs.sap.com/2006/03/04/when-should-we-refactor/
- https://www.martinfowler.com/bliki/DesignStaminaHypothesis.html
- https://en.wikipedia.org/wiki/Code_refactoring

Books:

- Refactoring: Improving the Design of Existing Code 2nd edition
- Code Complete (Developer Best Practices) 2nd edition

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Q&A

Thank you

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