

# Giving Students a Glimpse of the SPL Lifecycle in Six Hours: Challenge Accepted!

**Clément Quinton**



# The Story

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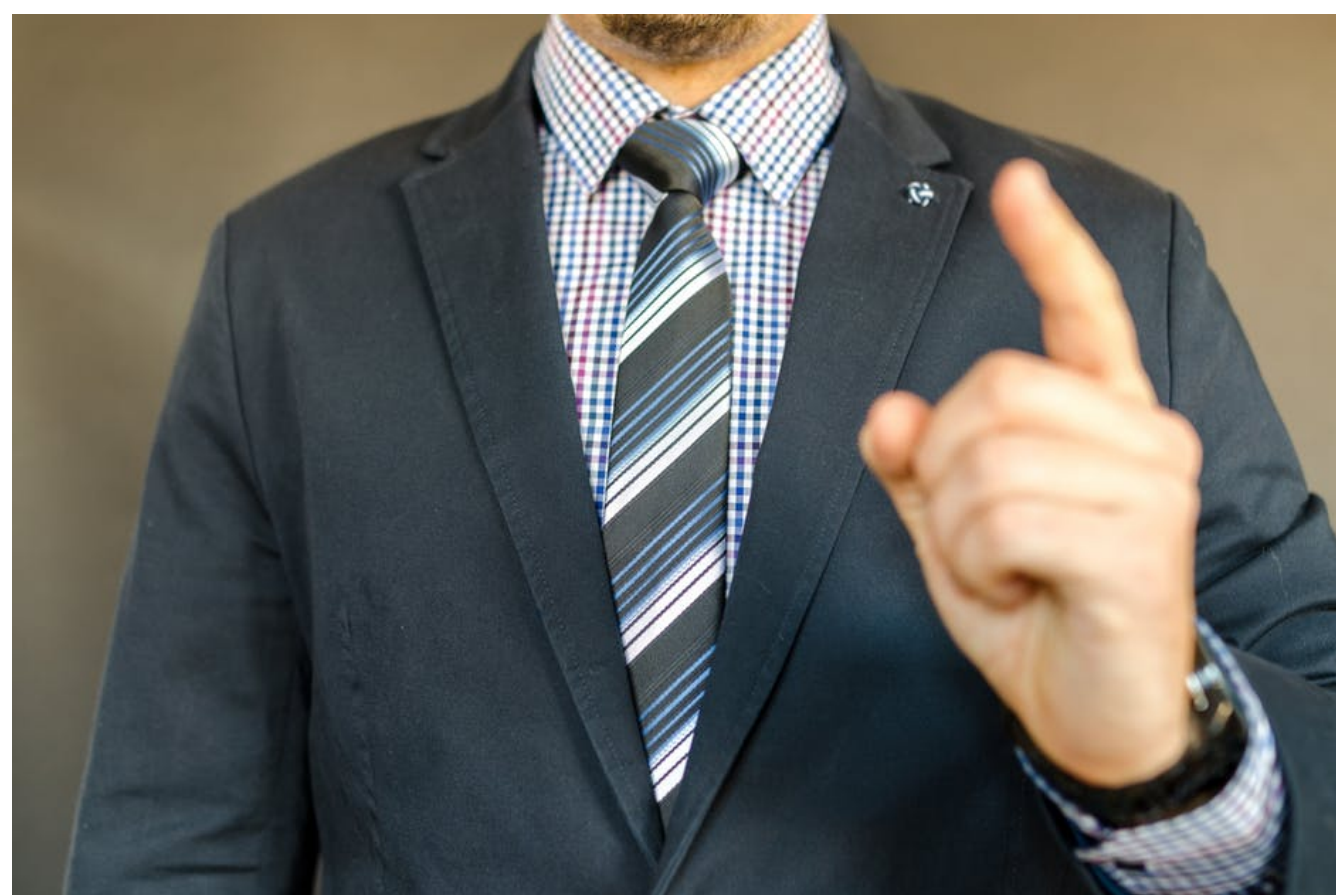
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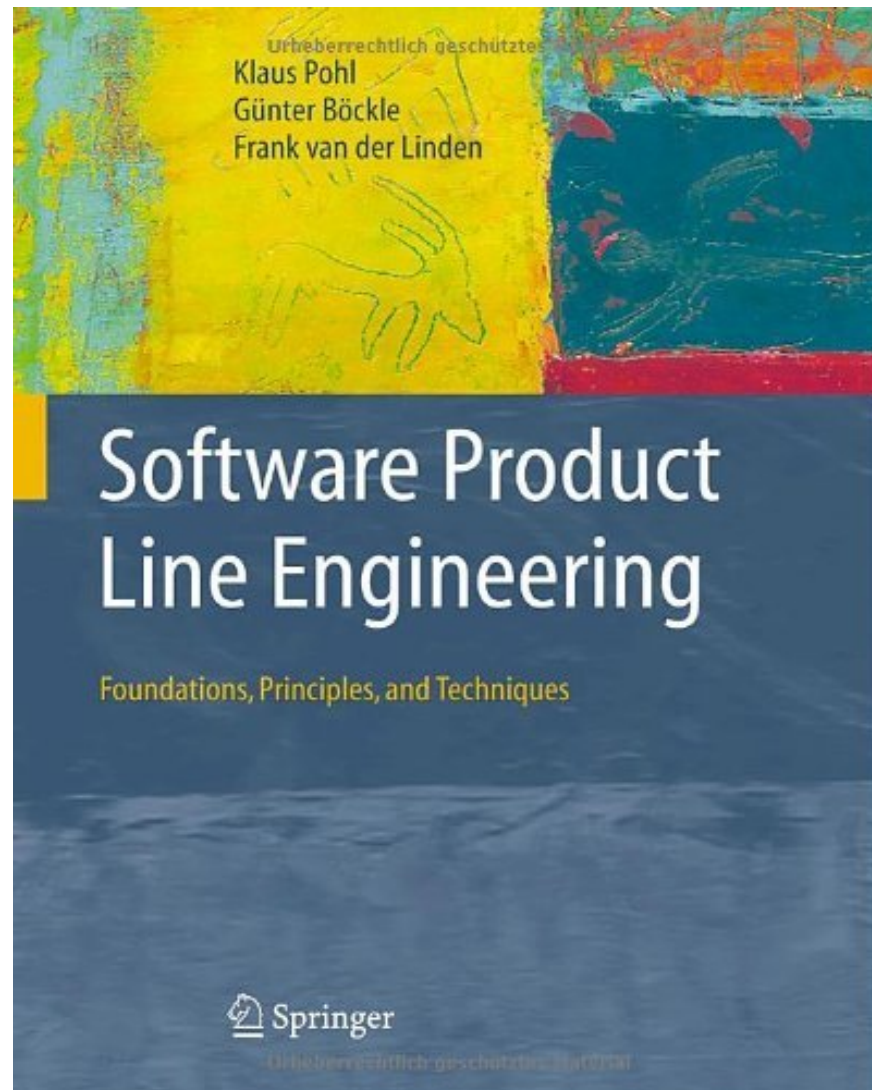
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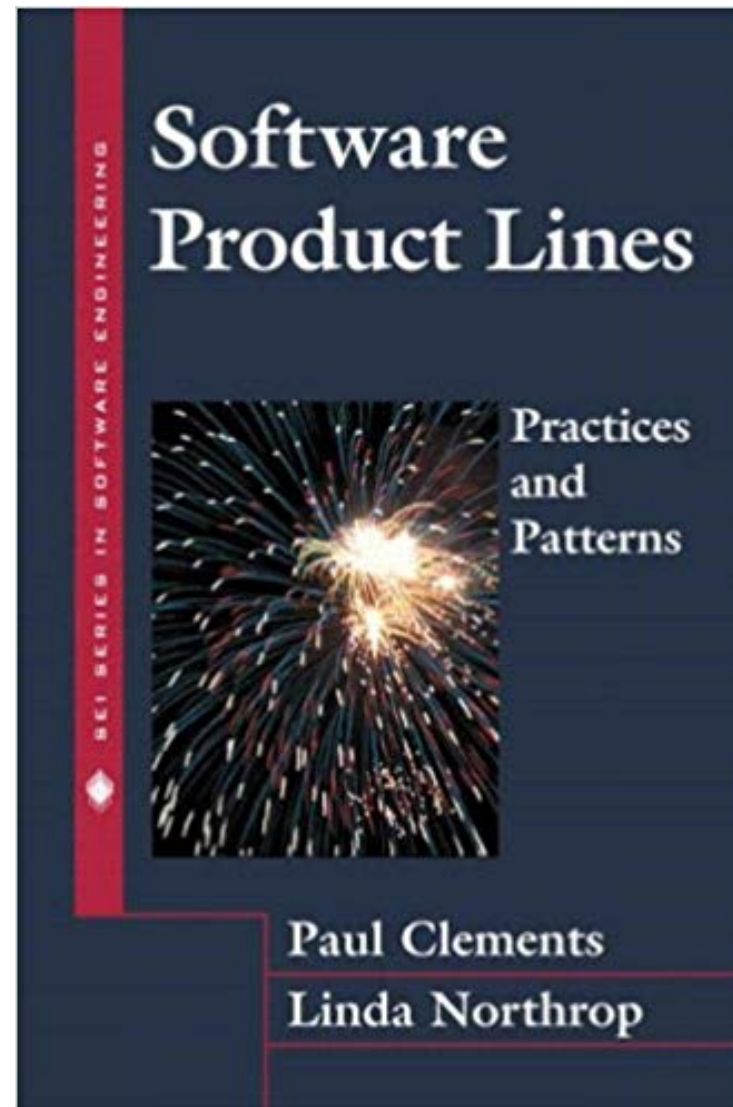




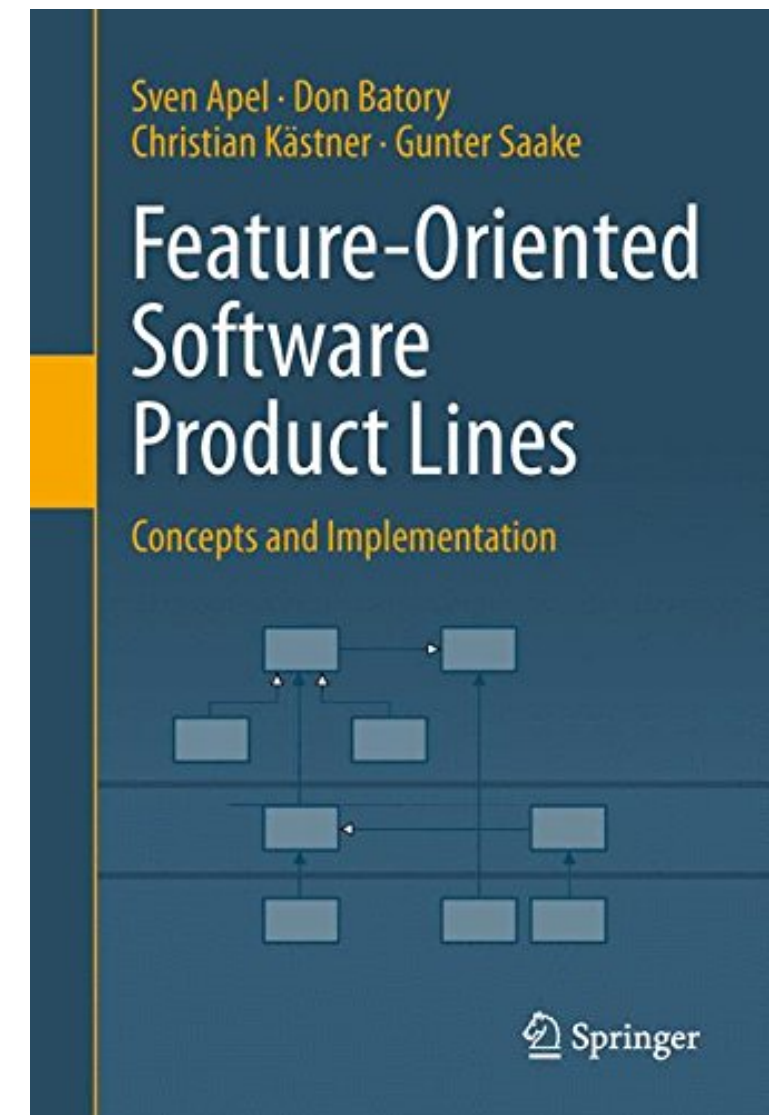
# Six Hours?!



467 pages



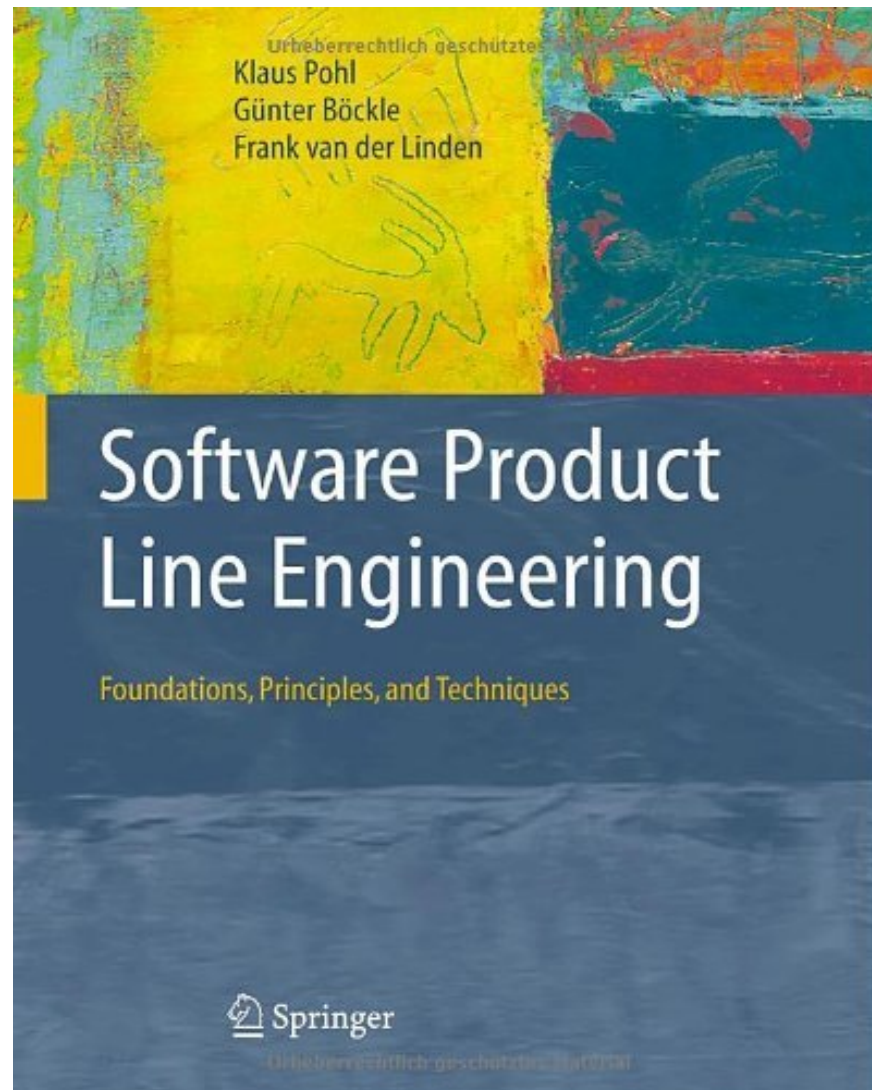
563 pages



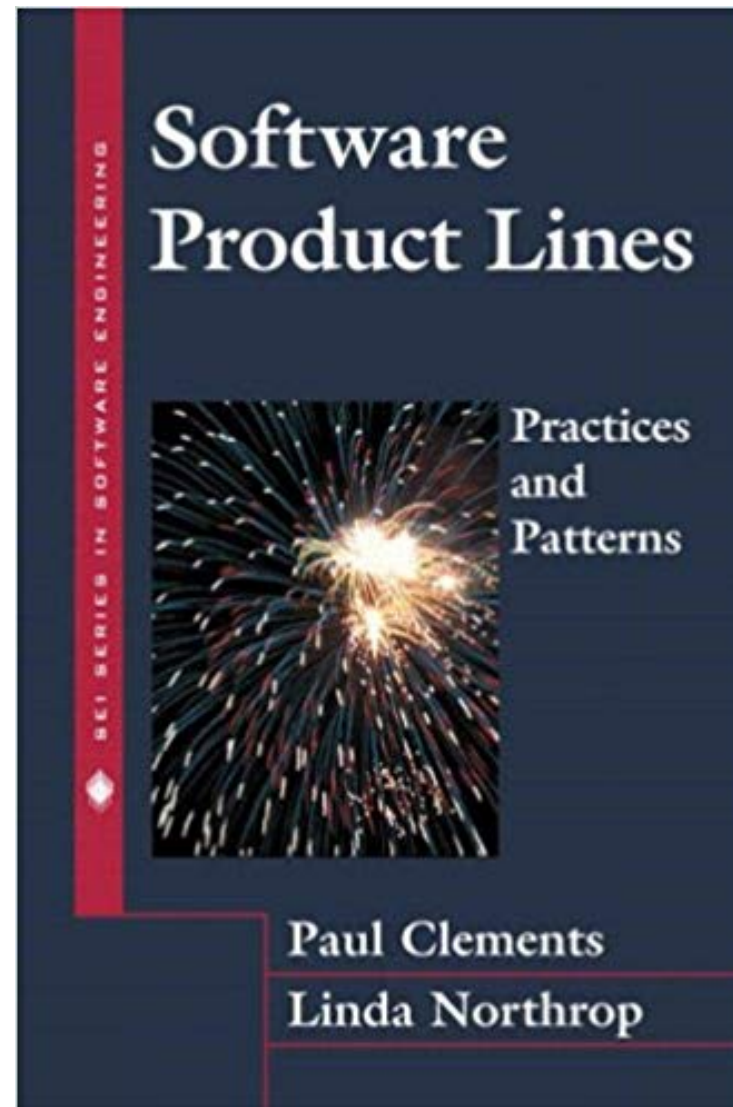
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"A **14-lecture course** which covers **almost** all the book."

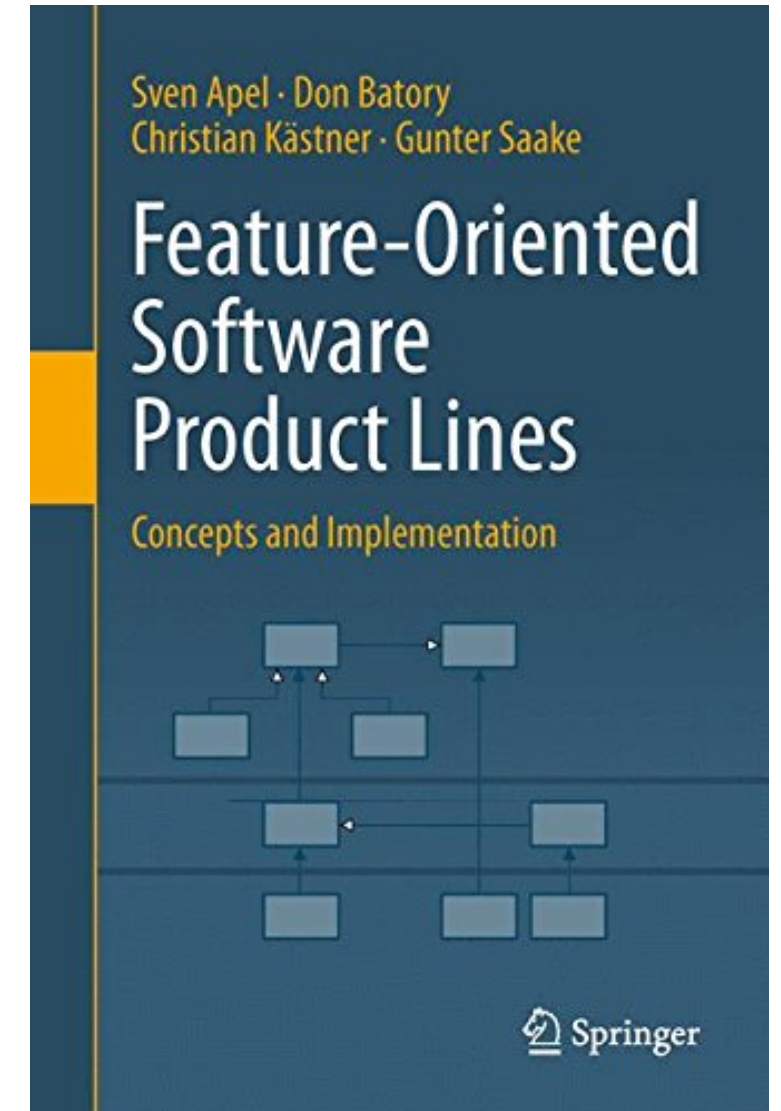
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  - Short: two lessons of 3 hours each
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## ▶ Audience

- Circa 25 students
- 65/70%: 2 days @company, 3 days @Univ. Lille



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## ▶ Objectives

- Make them develop by and for reuse
- See possible application(s) in their work

# Lesson #1

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▶ Lecture: 45/60 minutes

[\*\*http://teaching.variability.io/\*\*](http://teaching.variability.io/)

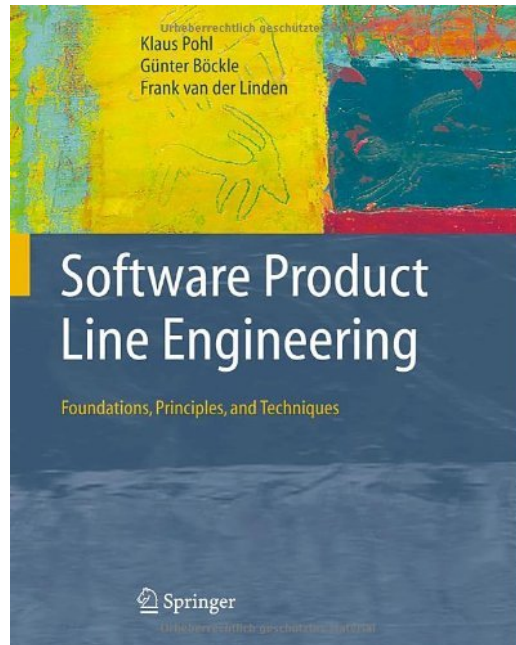


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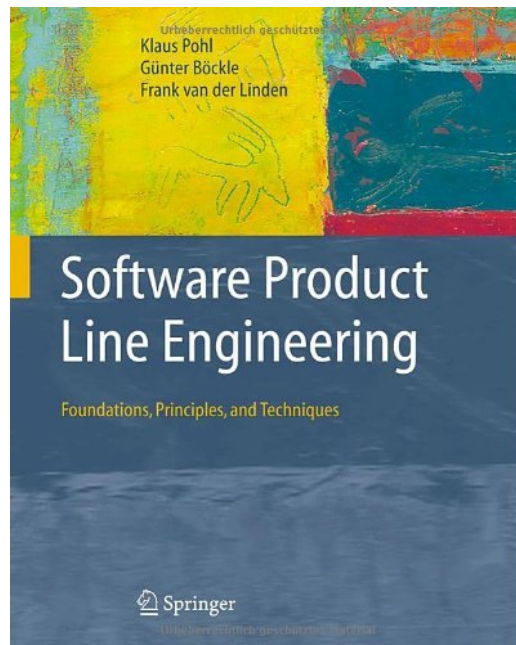


- Chapter 1: basics principles of SPLE
- Chapter 2: domain and application engineering

# Lesson #1

## ► Lecture: 45/60 minutes

<http://teaching.variability.io/>



- Chapter 1: basics principles of SPLE
- Chapter 2: domain and application engineering

## ► Practical session

- Read the paper
- Answer some questions

Pr. Ralf Hahn 2014/15

### HomeAway's Transition to Software Product Line Practice: Engineering and Business Results in 60 Days

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BigLever Software  
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#### Abstract

*The genesis of HomeAway, Inc. was startup by accretion – eight companies in the web-based vacation home rental market were acquired and merged. The technical solution during the merger and acquisition phase was to assimilate the software functionality of each of the eight companies into a one-size-fits-all application that could be configured with runtime settings to support the look-and-feel of the original eight. When rapid growth and an aggressive business plan pushed the one-size-fits-all approach beyond its limits, HomeAway decisively applied the 3-Tiered Software Product Line (SPL) Methodology and the Gears Unified SPL Framework to transition to a Software Product Line practice. This case study explores how HomeAway leveraged the 3-Tiered Methodology and Gears to make their transition, accelerate software development, reduce defect density, lower development overhead, and extend the scalability of its portfolio to better achieve its aggressive business goals – all within 60 days.*

fully automated production line deliver optimized developer productivity and significant reductions in per-product development cost.

- **Middle Tier: Core Asset Focused Development.** Shifting from product focused to core asset focused development enables the portfolio to be developed as a single system rather than a multitude of products. High levels of software reuse and deep core asset expertise are the result, leading to optimized product quality.
- **Top Tier: Feature Based Portfolio Evolution.** As the business transitions from product based to feature based portfolio evolution – where the entire portfolio evolves by adding or modifying feature requirements – the result is extremely efficient collaboration and between the business and engineering teams, leading to faster time-to-market and increased product line scalability.

*This is the story of one company's experience applying the 3-Tiered SPL Methodology.*

# Lesson #2

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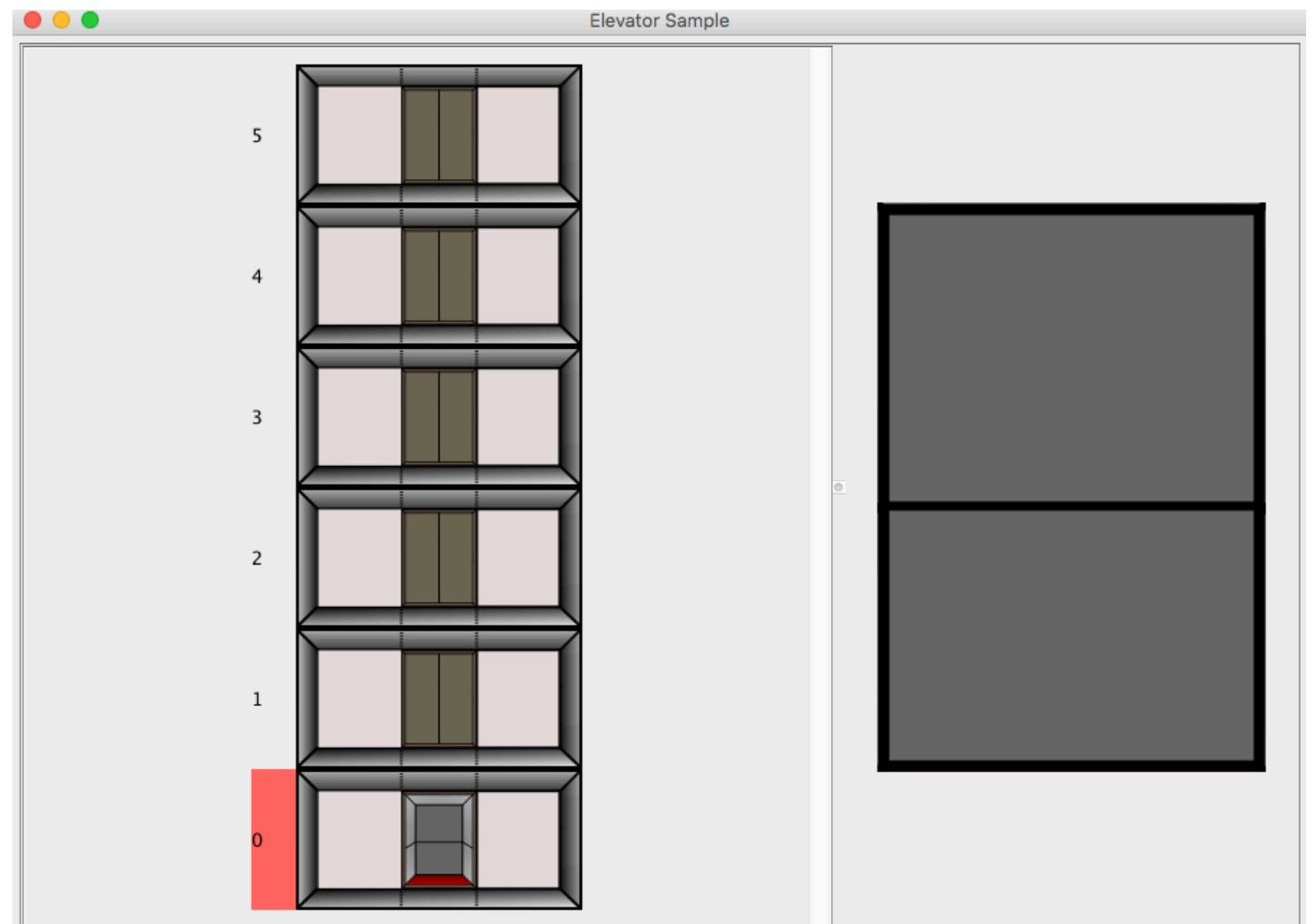
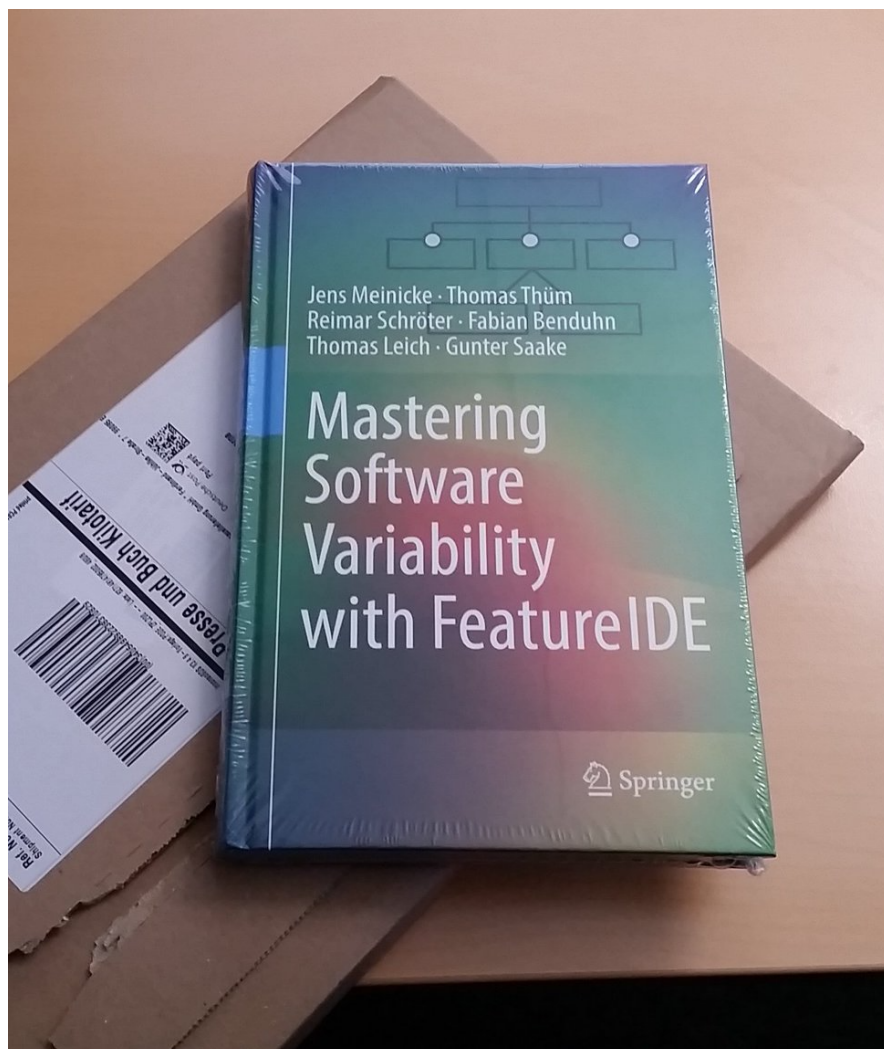
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  - Variability modeling and analysis
  - Tool support: FeatureIDE

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  - What should I change/would you change?



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  - Reading the paper: too long and boring
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  - SPLE is useless in a professional context
  - The tool was a bit complex to use

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- ▶ Answers
  - Reading the paper: too long and boring (1)
  - The course was too short (2)
  - SPLE is useless in a professional context (3)
  - The tool was a bit complex to use (4)
  
- ▶ Quick analysis
  - Students are not used to read English/scientific papers (1)
  - (1) → (3) ?
  - But (2) indicates the opposite
  - (4): probably my fault

# Comments/Discussion

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  - Use the 80/20 Pareto principle (20% concepts, 80% lab)
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- ▶ Lecturer skills
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- ▶ What would you do/change?
  - Cause I have to teach it again!

# Giving Students a Glimpse of the SPL Lifecycle in Six Hours: Challenge Accepted!

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# Giving Students a Glimpse of the SPL Lifecycle in Six Hours: Challenges Ahead!

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