

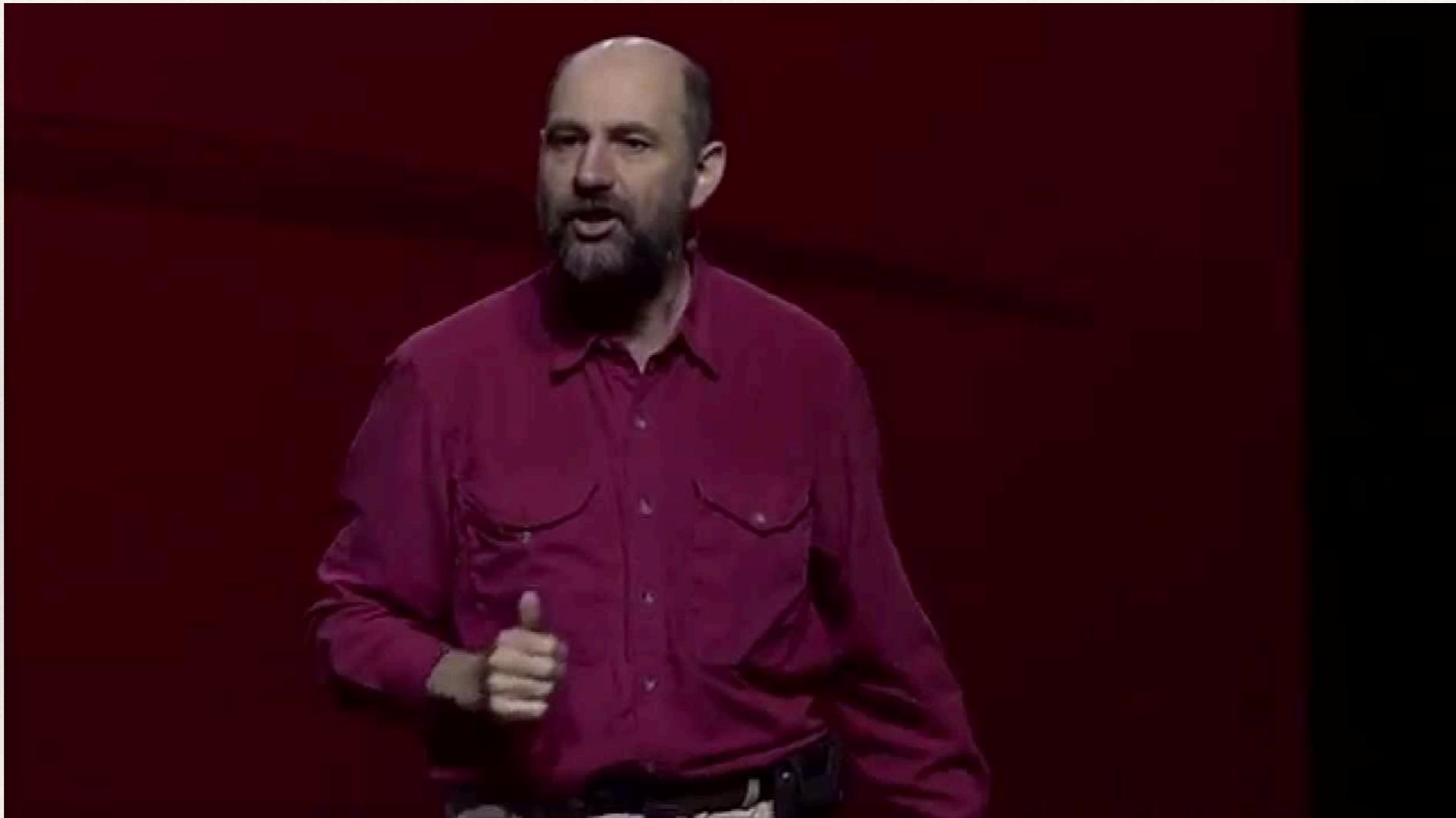


Workshop

Writing White Papers

Ganesh Samarthyam
Manoj Ganapathi

Pop Quiz - what's common between them?



Martin Fowler

Pop Quiz - what's common between them?



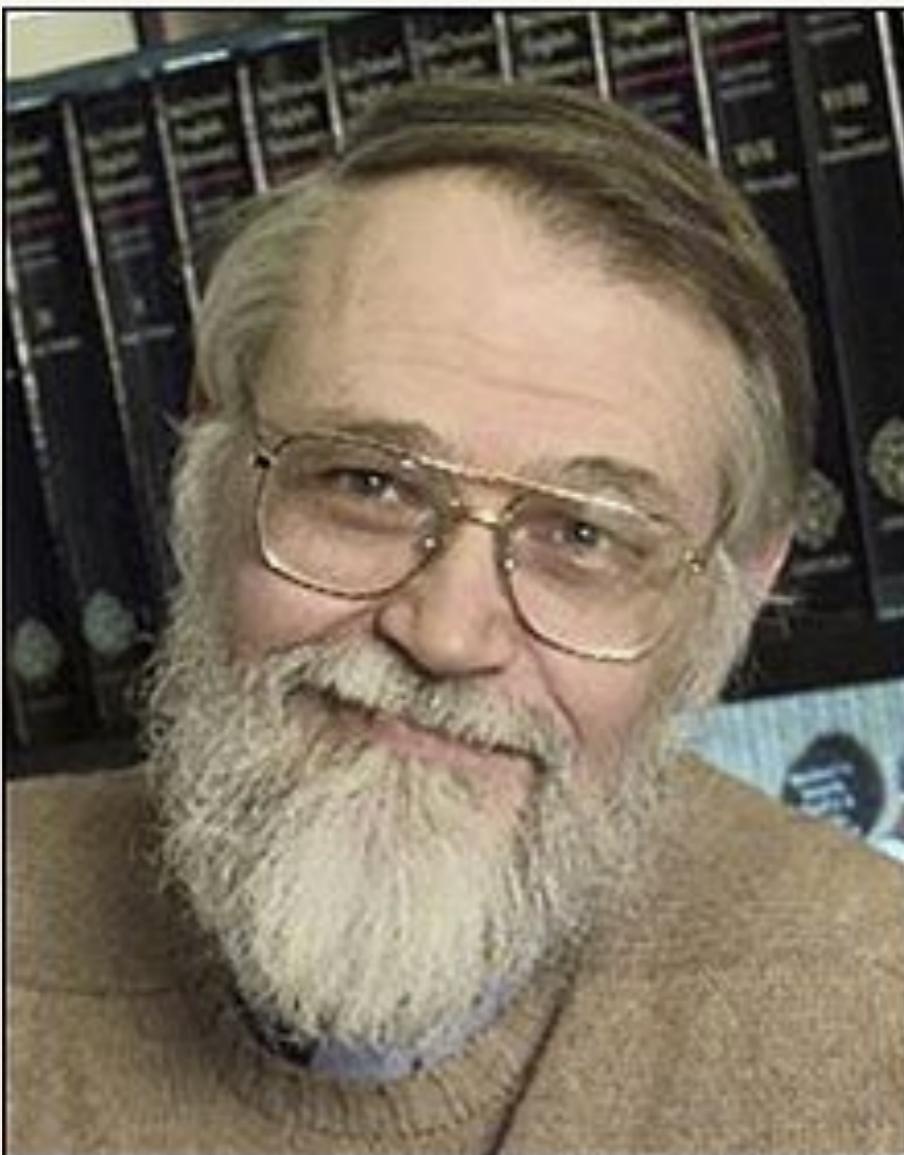
Kent Beck

Pop Quiz - what's common between them?

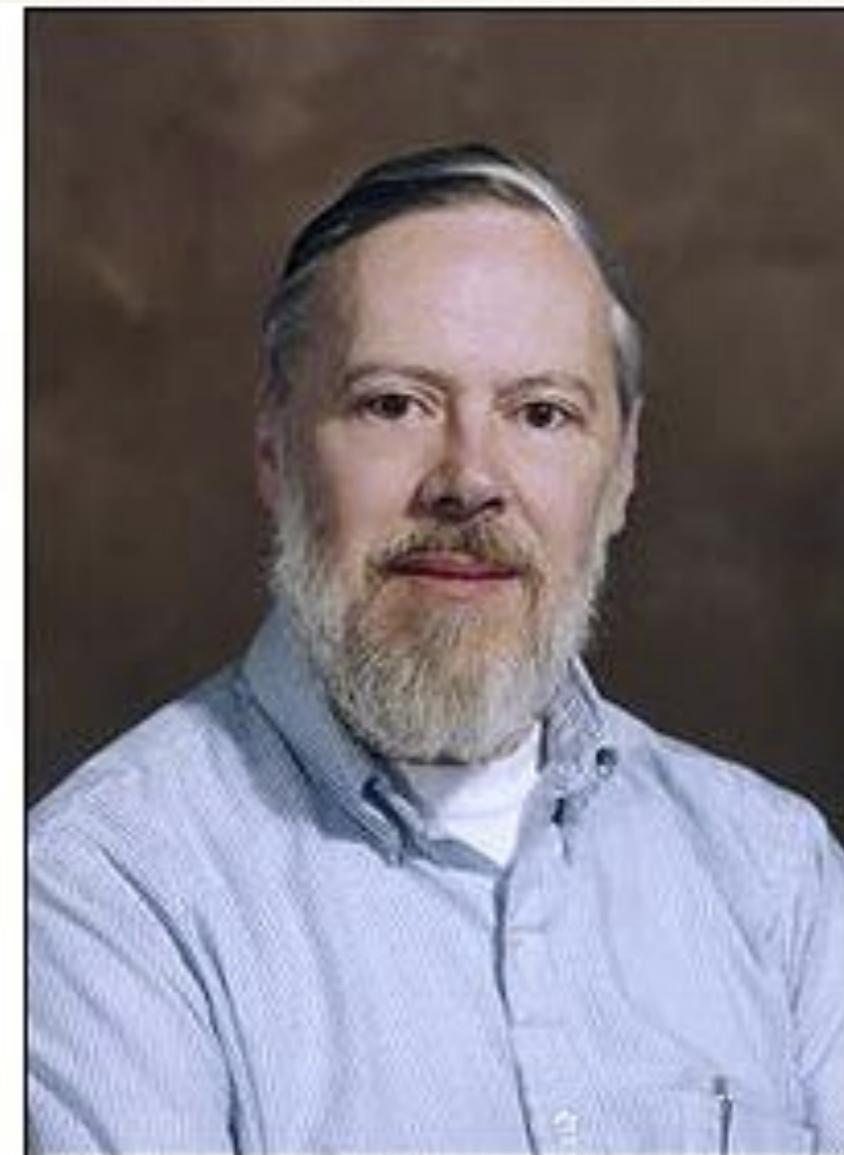


Robert C Martin (Uncle Bob)

Pop Quiz - what's common between them?

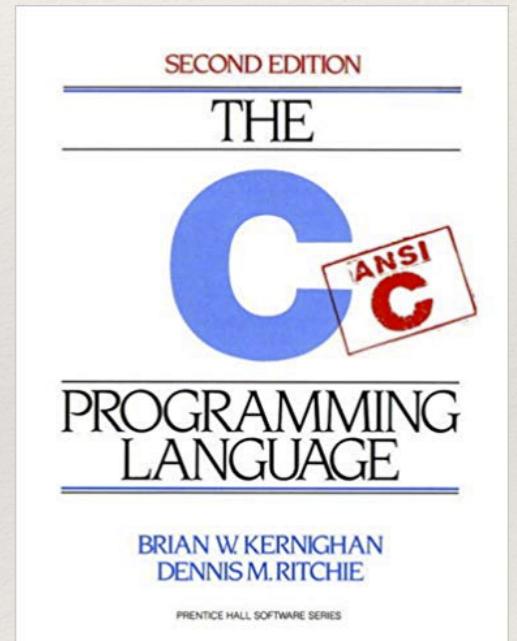
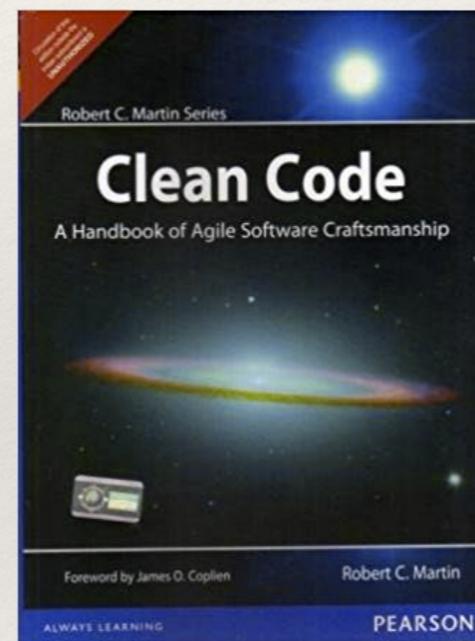
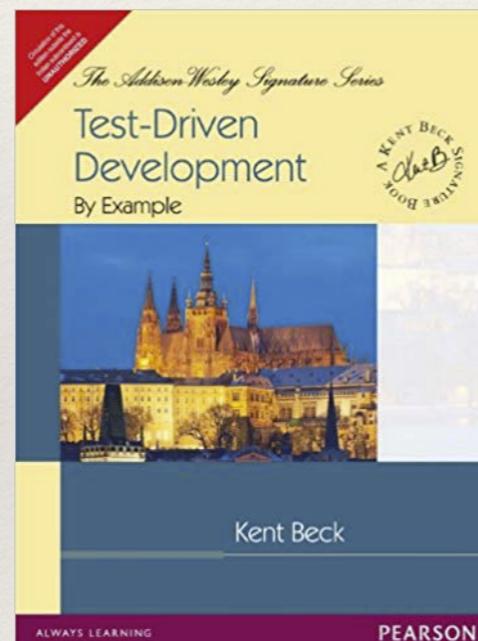
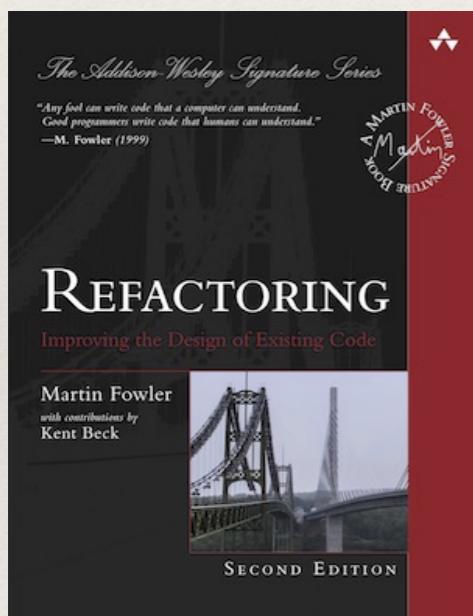


Brian Kernighan



Dennis Ritchie

Expert programmers - but more than that!



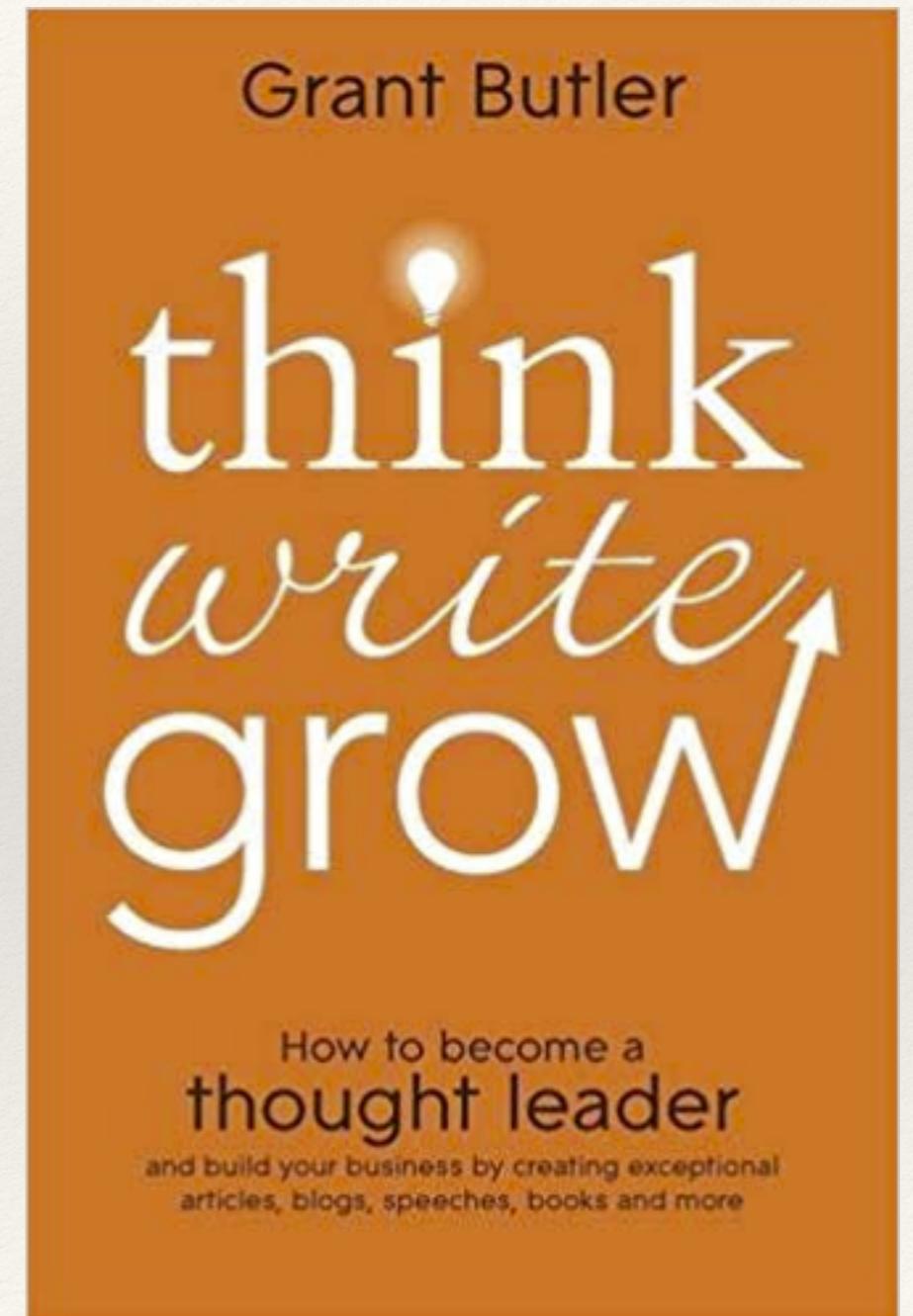
They are well-known authors of the books on the respective topics!

This is more than a coincidence!

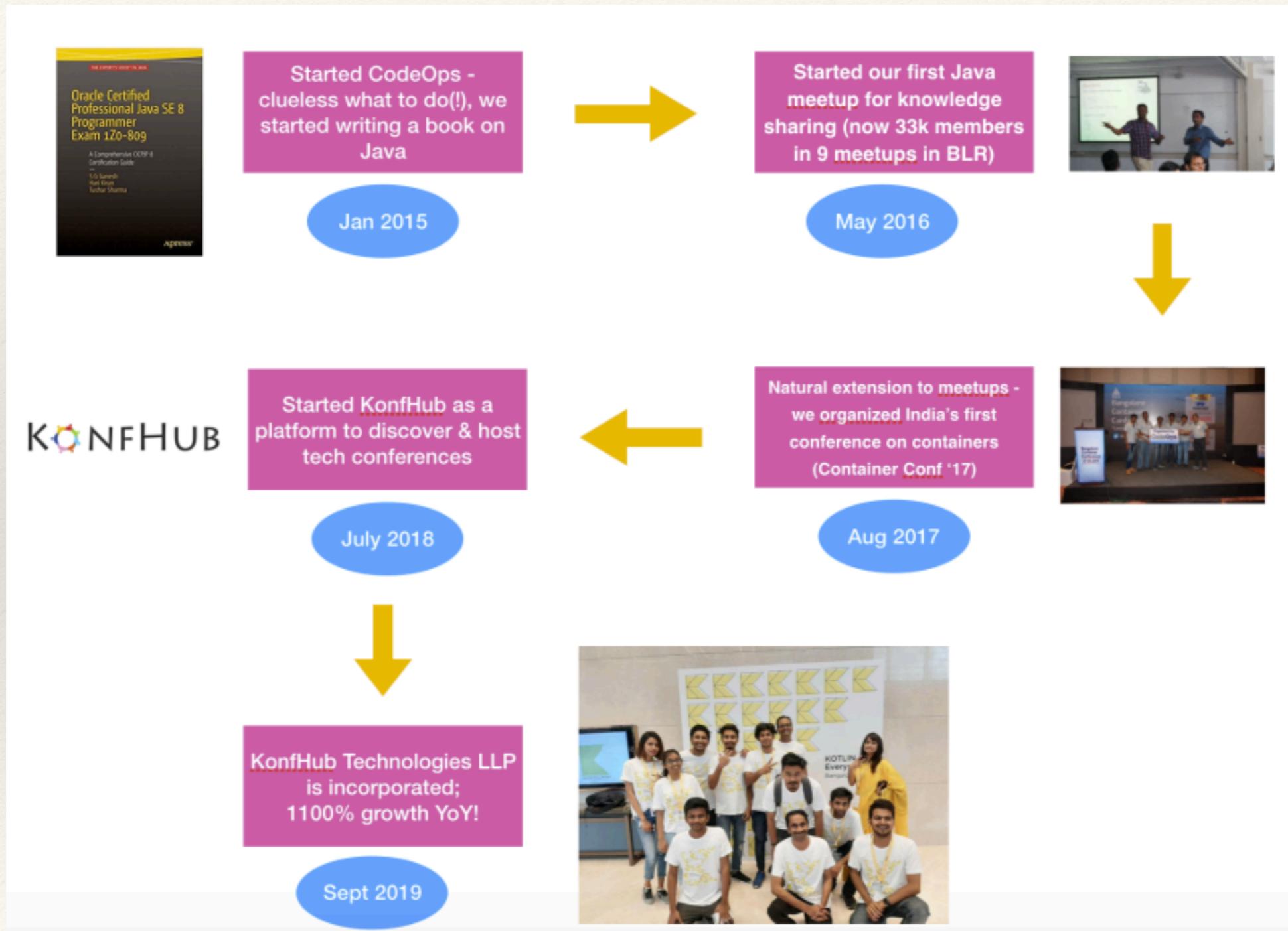
- ❖ Writing is an effective way to:
 - ❖ Demonstrate expertise
 - ❖ Channelize/streamline your thoughts
 - ❖ Connect with a community of passionate people
 - ❖ Share knowledge
- ❖ ...

Not just books, writing of different forms

- ❖ Writing is in different forms - blogs, articles, white papers, conference papers, books, research papers, ...
- ❖ Writing in different forms:
 - ❖ Level of formality
 - ❖ Target audience
 - ❖ Impact
 - ❖ Reach
 - ❖ ...



Writing changed my life - so it can for you!



Can I write?

A screenshot of a web browser showing the Nike Inc. website. The header includes the Nike swoosh logo and the text "NIKE, Inc. – About NIKE, Inc.". Below the header are standard browser navigation buttons (back, forward, search, etc.) and a URL bar displaying "nikeinc.com/pages/about-nike-inc". To the right are links for "ABOUT", "CAREERS", "RESPONSIBILITY", and "INVESTORS", along with a "SEARCH" bar and a magnifying glass icon.

ABOUT NIKE, INC.

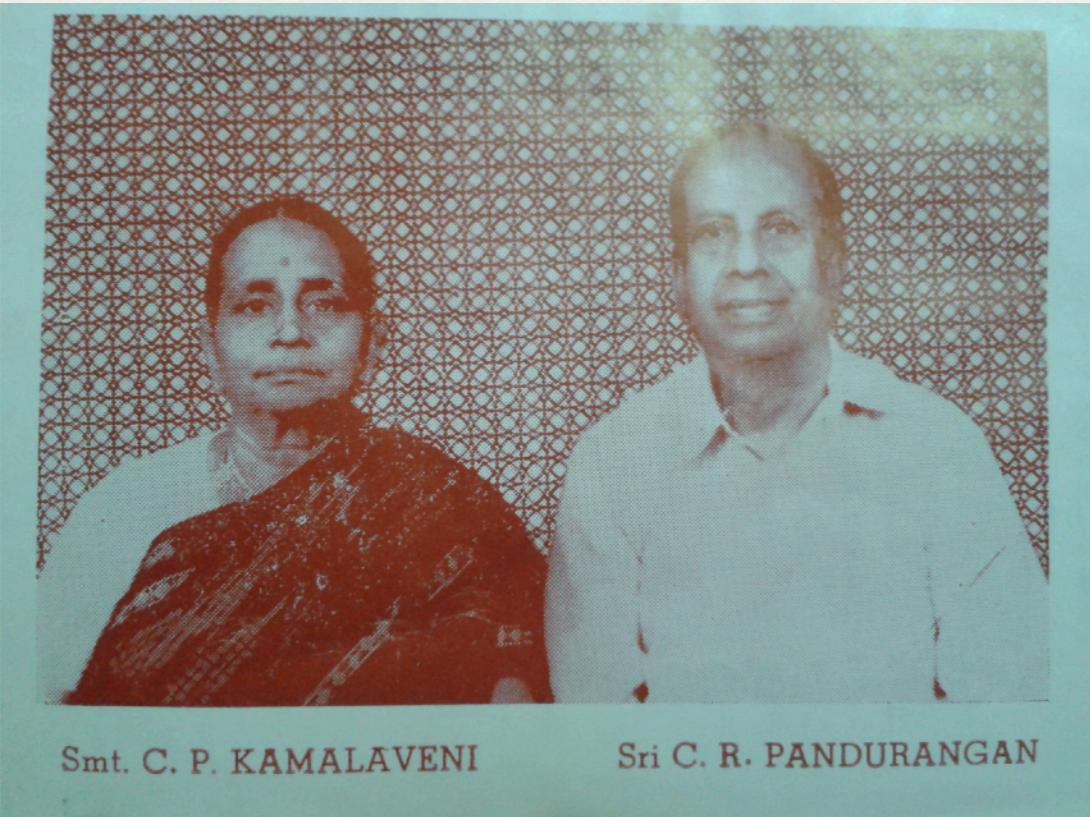
NIKE, Inc. is the world's leading innovator in athletic footwear, apparel, equipment and accessories.

**OUR MISSION:
TO BRING INSPIRATION
AND INNOVATION TO EVERY
ATHLETE* IN THE WORLD**

*IF YOU HAVE A BODY, YOU ARE AN ATHLETE

Just like Nike's mission statement - if you can talk, you can write!

If she can write, so can you!



Smt. C. P. KAMALAVENI

Sri C. R. PANDURANGAN

వంటలు - పీండి వంటలు
-:చేయు విధానములు:-

.. నంకలనము : -
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: థర్టగారు :
సి. ఆర. పాండురంగన్
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సి. వి. పరాంకుశం, B.S.C., D.M., I.T.

: కుమార్తె :
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తల్లితండ్రులు :
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క. వి. తాయారమ్మ

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If I can write, so can you!



But why should you write?

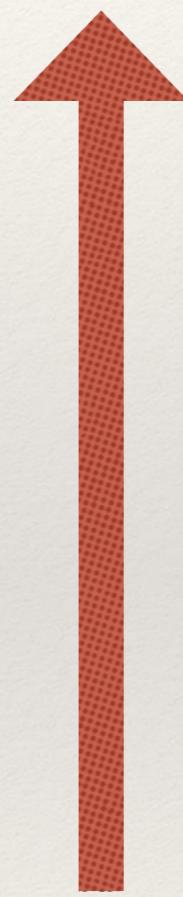


Why write?

- ❖ Expertise: get to focus on a particular / narrow topic
- ❖ Visibility: get to known in the community as experts
- ❖ Share: help others learn / know from you
- ❖ Sell: promote your product, service or idea
- ❖ Achievement: Get a sense of achievement

Different kinds of technical writing

- ❖ Research papers
- ❖ Books
- ❖ White papers
- ❖ Magazine articles
- ❖ Blogs



Formality

Kind of writing => vast differences

- ❖ Level of formality: blogs are quite informal; research papers are quite formal
- ❖ Target audience: a book on “Learn Python 24 Days” targets a different audience compared to a blog post on “How to reduce your monthly Azure bills”
- ❖ Length: an article is of few pages whereas a book spans a few hundred
- ❖ Depth: articles are mostly shallow whereas research papers go in-depth on a specific niche topic
- ❖ Purpose: white papers push a point of view or sell a product or a service whereas a book is often to teach or educate
- ❖ Impact, duration of relevance, extent of collaboration required ...

White papers

- ❖ White papers are long-format written content
 - ❖ marketing collateral typically written for external consumption - as part of positioning or marketing a product (sales focus)
 - ❖ for inbound marketing to get leads
 - ❖ also written for internal use (e.g., for getting funding for a new product)
 - ❖ justify the investment or initiate change in strategy

The writing process

A real (success) story

Untitled — Edited

Refactoring for Software Design Smells: M... Sharma: 9780128013977: Amazon.com: Books

Look inside ↗

Refactoring for Software Design Smells:
Managing Technical Debt Paperback –
November 14, 2014
by Girish Suryanarayana (Author), & 2 more
ISBN-13: 978-0128013977 | ISBN-10: 0128013974 | Edition: 1st

Buy New
Price: **\$58.75**

	Amazon Price	New from	Used from
Kindle	\$118.63	—	—
► Paperback	\$58.75	\$58.75	—

Refactoring for Software Design Smells

Published in Journal of Object Technology (Vol. 12, No. 2, 2013)

- ➡ S G Ganesh, Tushar Sharma, Girish Suryanarayana. *Towards a Principle-based Classification of Structural Design Smells*. In Journal of Object Technology, vol. 12, no. 2, 2013, pages 1:1–29.doi:10.5381/jot.2013.12.2.a1
- ➡ URL: http://www.jot.fm/issues/issue_2013_06/article1.pdf (open access)

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Classification of Structural Design Smells. In Journal of Object Technology, vol.
12, no. 2, 2013, pages 1:1–29.doi:10.5381/jot.2013.12.2.0001
- URL: http://www.jot.fm/issues/issue_2013_06/article1.pdf (open access)

It all started with
our initial paper on
classifying smells; we
got really positive
review comments,
which encouraged us
to work further to
write it as a book

기리쉬 서야나라아나,
가네쉬 사마스양,
터서 샤르마 지음
박재호 옮김



REFACTORING FOR
SOFTWARE
DESIGN SMELLS

소프트웨어 악취를 제거하는 리팩토링

구조적 설계 문제를 풀어내는 최선의 실천법



Our refactoring book
is now being
translated to other
languages; here is the
Korean translation of
the book!



36th International Conference on Software Engineering

Hyderabad, India • May 31 - June 7, 2014

ICSE 2014





36th International Conference on Software Engineering

Hyderabad, India • May 31 - June 7, 2014

ICSE



The book content evolved through research, training, writing, and presenting in conferences!

So, how the book “got” written?

- ❖ Key take-aways:
 - ❖ *simple core idea* - “smells as violation of design principles”
 - ❖ *collaboration* - exchange of ideas between like-minded professionals
 - ❖ *evolution* - natural content grew through trainings, writing, presenting, and researching



How to “develop” content?

- ❖ Ineffective to directly start writing the content you plan for
- ❖ Effective strategy: evolve the content
 - ❖ Give presentations on the topic
 - ❖ Create “infodecks” and share them in social media
 - ❖ Do your research (read relevant articles, thought leaders in that domain, ...) - *take copious notes*
 - ❖ Talk to colleagues or experts in the domain and gather insights
 - ❖ ...

Tools for writing

Generate text from speech

- ❖ Use a dictation software or use the dictation feature in your favourite word processor (typically MS Word)
- ❖ Now explain a friend / colleague - and dictate it
 - ❖ Or you can imagine as if you are explaining to your friend / colleague
 - ❖ You now have text (with errors / mistakes); edit the contents and Voila! you have written
- ❖ This technique is especially useful if you are already presenting to a live audience and want to benefit by creating a written article / blog as well from that text
- ❖ You can also use YouTube's "Transcription" feature (available for all videos!)

Use templates

- ❖ Identify best samples for articles, research papers, etc. that is similar to the idea that you have
 - ❖ Now use it as a template for your work

“good artists borrow, great artists steal.”

- Pablo Picasso

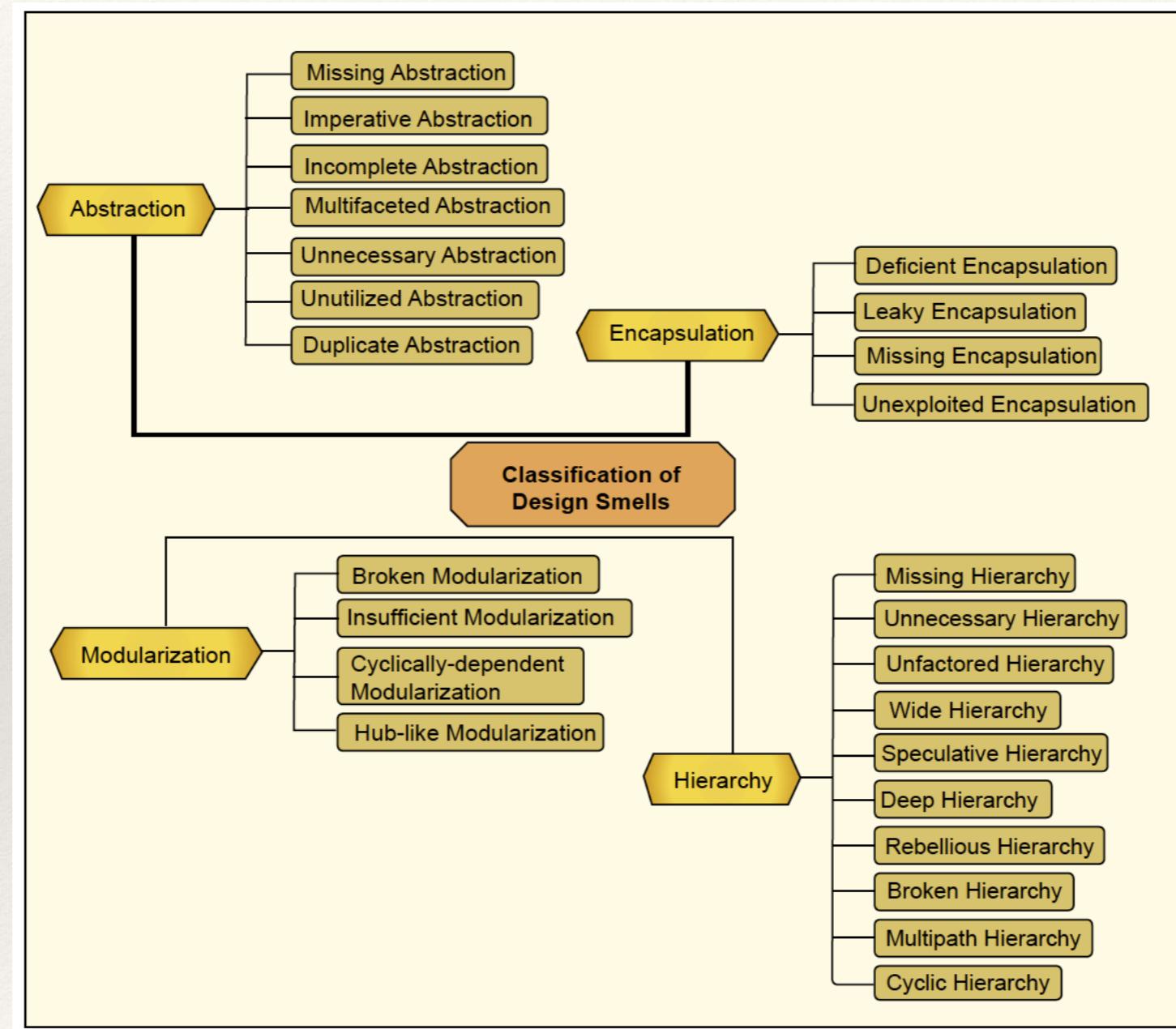
Mind-maps

- ❖ Mind maps are an excellent way to organise your ideas
- ❖ Present visually and organise & reorganise complex set of topics & sub-topics
- ❖ Helps generate creative & unique ideas in less time
- ❖ Can create a clear flow for your content

Mind-maps

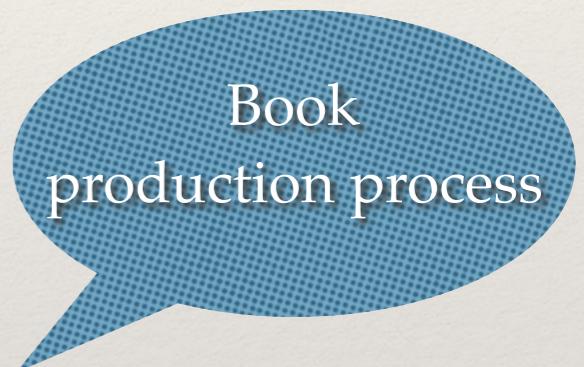
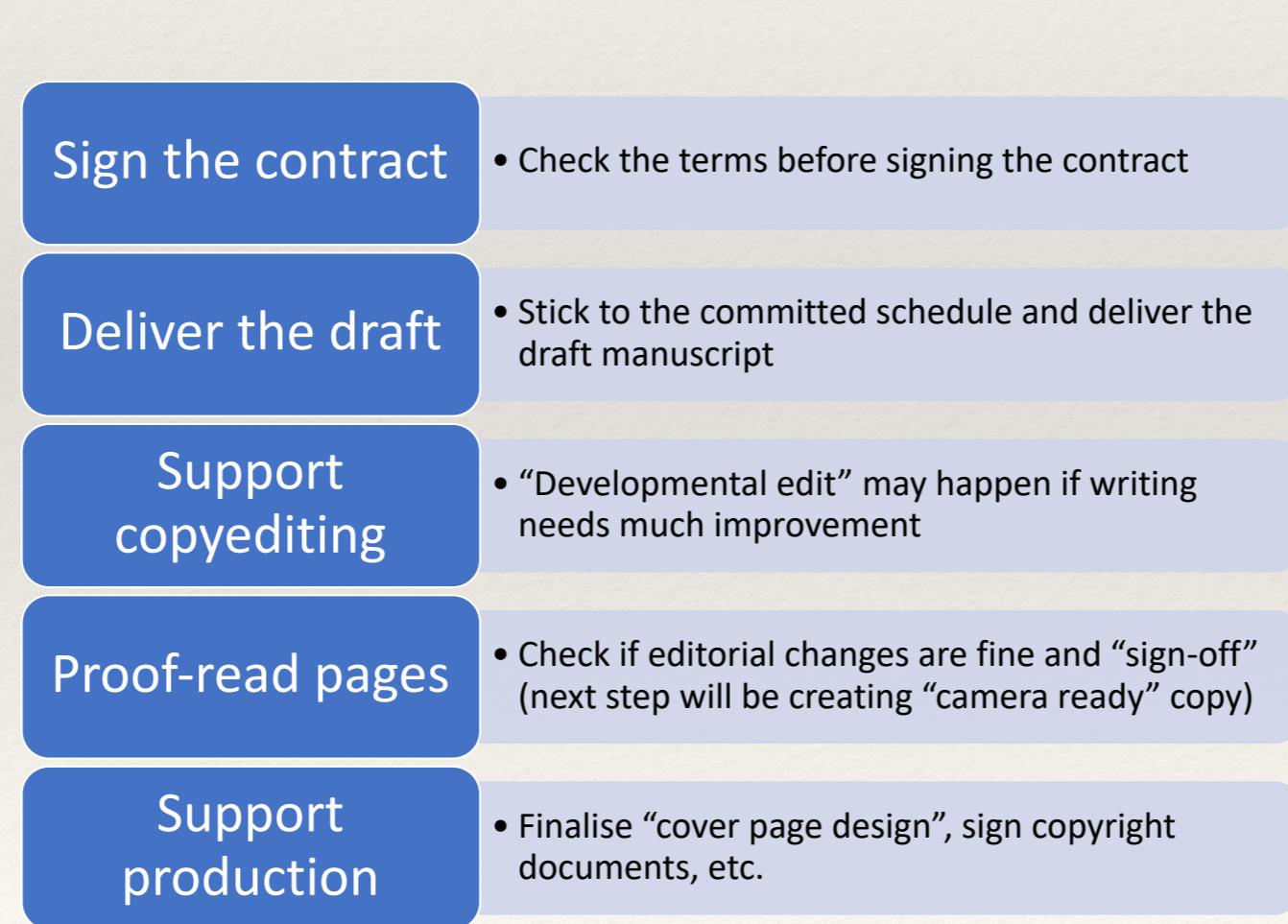


Mind-map example



Use “smart art”

- ❖ Visually organise and communicate your ideas
- ❖ Breaks the monotony of text (esp. dense technical stuff)



Spell-checkers & word-processors

- ❖ Word-processors today are reasonably sophisticated
 - ❖ You can dictate, spell-check, auto-correct, grammar check, convert to production-quality PDFs, and more
- ❖ Explore the features of existing word-processors
 - ❖ Always surprised to find people “discovering” features

Advanced tools

For most purposes,
MS Word is more than
enough!

- ❖ Graphviz - for automatically generating diagrams from a program!
- ❖ LaTeX - esp. for research papers - generating documents from a markup program!
- ❖ Photoshop - create production quality images / pictures
- ❖ PageMaker - create high-quality production-ready documents for printing
- ❖ ...

Writing process (focus on white papers)

White paper - process overview

- ❖ Create paper outline
 - ❖ Narrow-down on a theme or topic; working title
 - ❖ Determine target audience, paper objectives
 - ❖ Identify co-authors / contributors
- ❖ Expand the content
 - ❖ Research on the topic
 - ❖ Gather supporting material
- ❖ Revise, review, rewrite, enhance
- ❖ Production
 - ❖ Proof-reading, improving the presentation
 - ❖ Content sharing strategy

Create an outline

- ❖ Brainstorm topic ideas, narrow-down on a theme or topic
- ❖ Use your office template or choose suitable templates
- ❖ Start with a working title (takes time to finalise a title)
- ❖ Start writing the paper(!) and create an outline - what is missing becomes evident/obvious, so gives impetus to your further research & exploration
- ❖ Writing an effective paper is a challenging task - make it easier and enjoyable by identifying co-authors (like-minded but with different skills and abilities)

Research

- ❖ Nature of the research that you do depends on the kind of the paper you write
 - ❖ Product-related papers: competing offerings, limitations of current/existing solutions, USP & features of the solution, ...
 - ❖ Trends paper: Current state of the industry, survey findings, broader themes/undercurrents, ...
 - ❖ Position paper: Current pain points, state of the art, ...
 - ❖ Insights paper: Viewpoints and counter-viewpoints, in-depth analysis, ...

Supporting material

- ❖ Find case studies, real-world examples, use cases, scenarios, real (war)stories
 - ❖ These elements make your paper more lively & interesting
 - ❖ Substantiates the covered meat of the paper
 - ❖ Motivates, illustrates, or supports your paper theme
- ❖ Caution: anonymise as needed, be sensitive, keep it short & crisp, make sure its relevant

Rigor in content & presentation

- ❖ Provide answer the implicit question: “why should I trust what you say?”
 - ❖ Substantiate claims
 - ❖ Provide relevant references
 - ❖ Support with data, case studies, research findings, ...
- ❖ Credit sources (quotes, images / pictures)
- ❖ Provide relevant references & external links

Visual appeal

- ❖ Make research data / findings accessible through tables and charts
- ❖ Create illustrations & diagrams
- ❖ Use elements like “smart-art” and “mind-maps” to make content appealing
- ❖ Use call-outs, side-bars and boxes

Revise, revise, revise

- ❖ **Impossible** to get a production-quality white paper of significant length in the first attempt itself
 - ❖ A paper should iteratively evolve - incrementally add content as you expand
- ❖ Review: get inputs from peers, experts, technical leads managers & stakeholders (at *right* points in time)
- ❖ Revise: make small changes at a time - focus on content and postpone grammatical & language aspects towards later stages
- ❖ Rewrite: Don't hesitate to completely rewrite your paper if needed

Best practices

Plan 3x amount of effort/time

Writing white papers is a time-consuming & effort-intensive process! Just like software, we tend to underestimate the effort required for writing

Title & executive summary is the face of the white paper - make sure it's good

Most people will just read the title and executive summary - and decide to read the rest or choose the parts to read; make sure it has come out well

Research thoroughly!

systematically analyse competing solutions,
explore alternatives, perform detailed data
collection & in-depth analysis, ...

Make your paper visually appealing

if your paper is all “text, text, text” - that’s boring;
use appealing visual elements: diagrams /
illustrations / pictures, tables, charts, ...

Be open to discovering new ideas “on the go”

most papers start with some idea and end-up with a completely different idea; why? because action fuels creativity! (perhaps only Newtons come up with ideas brooding under apple trees)

Read excellent papers and books

There is nothing more inspiring and gives insights better than reading well-written papers and books

- we learn how to write by *both* reading and through writing!

Write the executive summary towards the end

Though physically the first part of the paper, it should ideally be written last because your whole paper and contributions become clear only towards the end before production activities start

Fact or Fallacy?

Fallacy!
Structure depends
on the kind of the
paper

There is ONE fixed structure for any white paper!

Fact! You or
your co-authors
should have expertise
- its a must

Expertise (technical, domain, ...) is a must for
writing papers

Fallacy!

There is ONE RIGHT WAY to write a paper

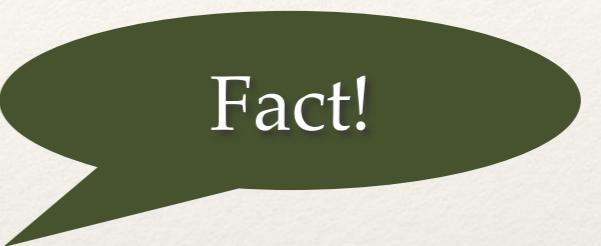
Start from the first chapter	Take random notes and later 'stitch' them together
Work in a quiet place for days together	No dedicated time - write whenever there is some free time
Directly type in a word processor	Write it in a notebook and then type it in a word processor
Directly write it in the book format	Create presentations or write articles and later convert it into a book
Get acceptance from publisher and then start working on the contents	Complete the draft and then reach out to the publishers

This one is for book writing: either approach could be effective

Fallacy!

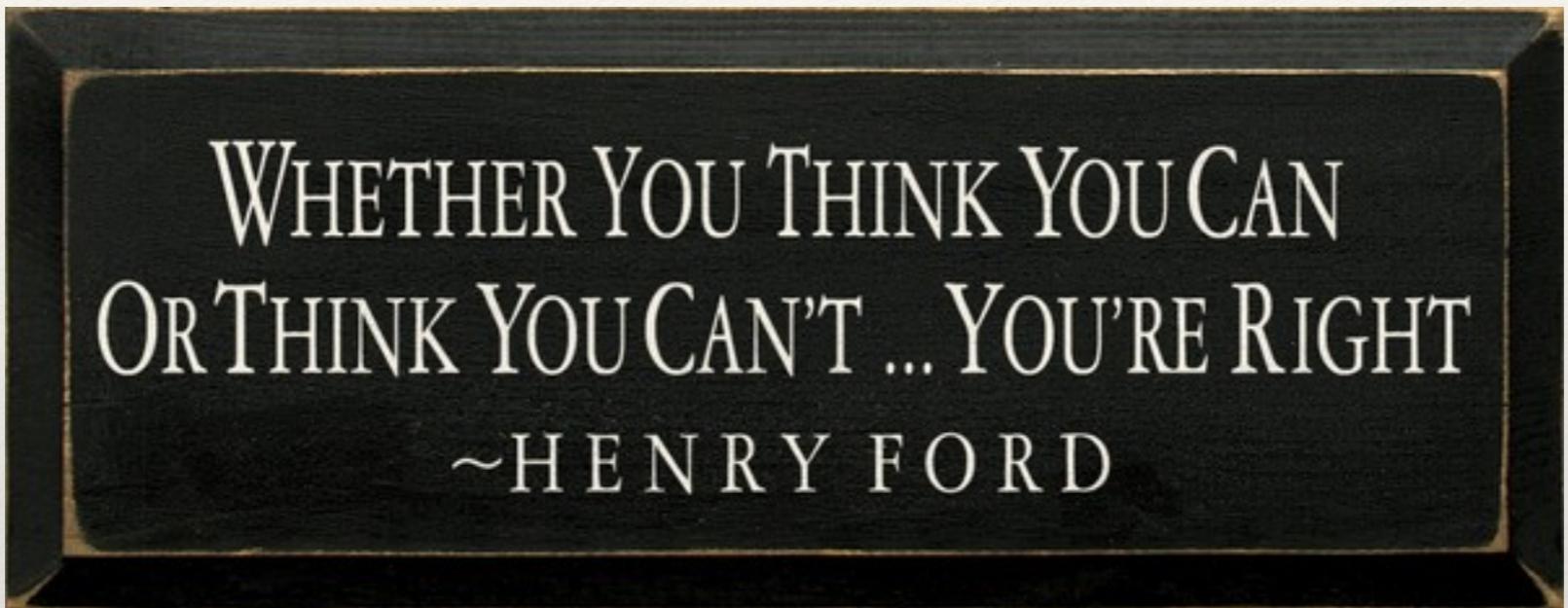
Tools can be an aid -
but MS Word is more
than enough!

You need specialised tools to write white papers



Fact!

Even best of the breed writers mostly don't "get-it-right-the-first-time"



WHETHER YOU THINK YOU CAN
OR THINK YOU CAN'T ... YOU'RE RIGHT
~HENRY FORD