

A Friendly Introduction to Software Documentation

Defining Documentation and Its Importance

By Arist Bravo

What is Documentation?

- Any item which conveys information about software
- 2 types: technical docs (for SWEs) and user manuals (for users)
- Our focus: technical docs
- EX of technical docs:

```
margin-left: 10px;
margin-right: 10px;
font-weight: bold;
font-flow: auto;



Authentication Failed



Please contact the administrator.



dError1" class="dError1">>Please contact the administrator.

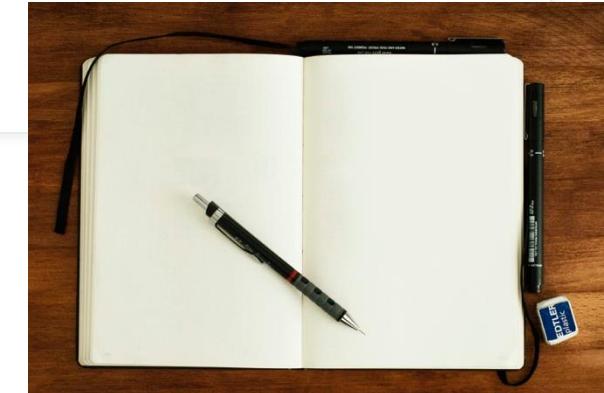

</saml-auth-status>-1</saml-auth-status>

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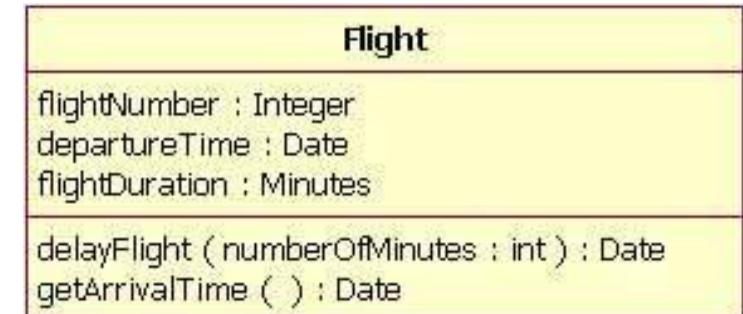
Source Code

```
// Output the tickets
System.out.println(ticket_string);
```

Comments and
READMEs



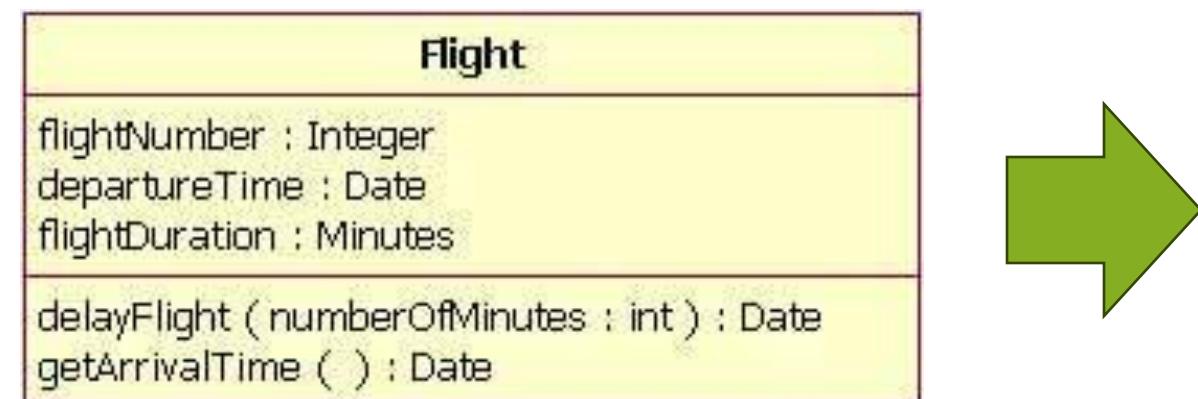
List of Specifications



Diagrams and Code for Classes

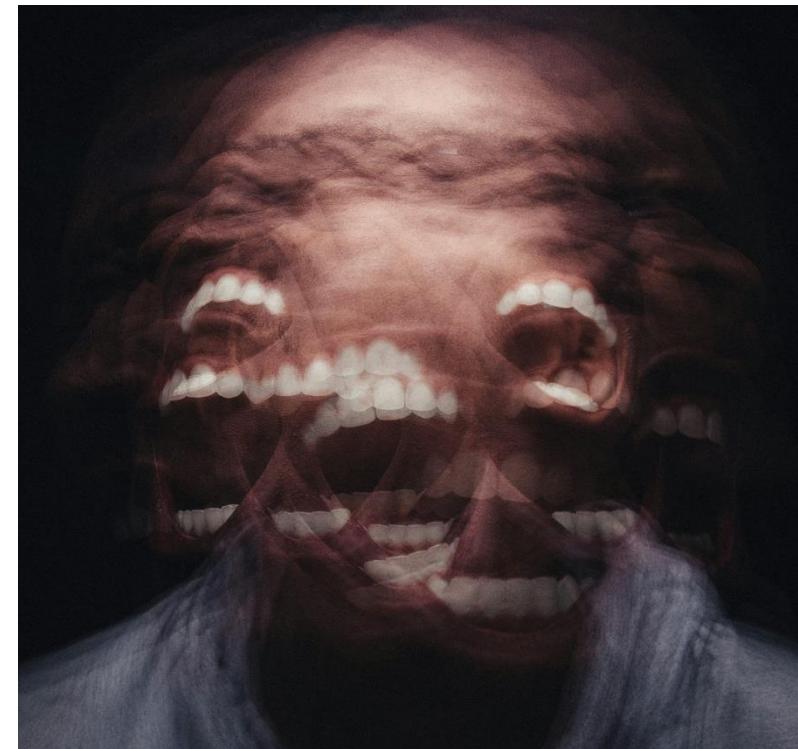
Why is Documentation Important?

- Researchers found:
- Documentation gives key info about the projects you code
- OOP developers look at source code, comments, classes, etc. for help as they program
- 61.5% of surveyed developers saw documentation as moderately important (Plösch et al.)



An Anecdote to Explain...

- When I was in CSC207, I had to help my team members figure out a bug in their code
- I was unfamiliar with their code... and their code had poor comments... the result?



"But Our CSC Projects Are Small!"

- What about big software projects in the real world?
- Many people come and go – are unfamiliar with code
- You can't just "read everything" to understand the project (too much)
- Documentation helps here; invest in your future!

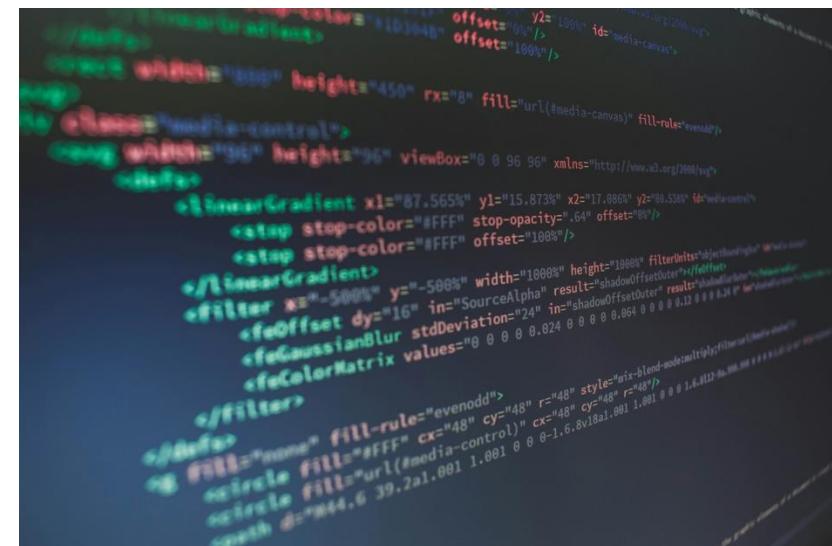


Docs in Industry: Non-Standard

- ~60% of surveyed developers don't follow a standard (Plösch et al.)
- Also, standards (like ISO) aren't viable; after all, ISO says...

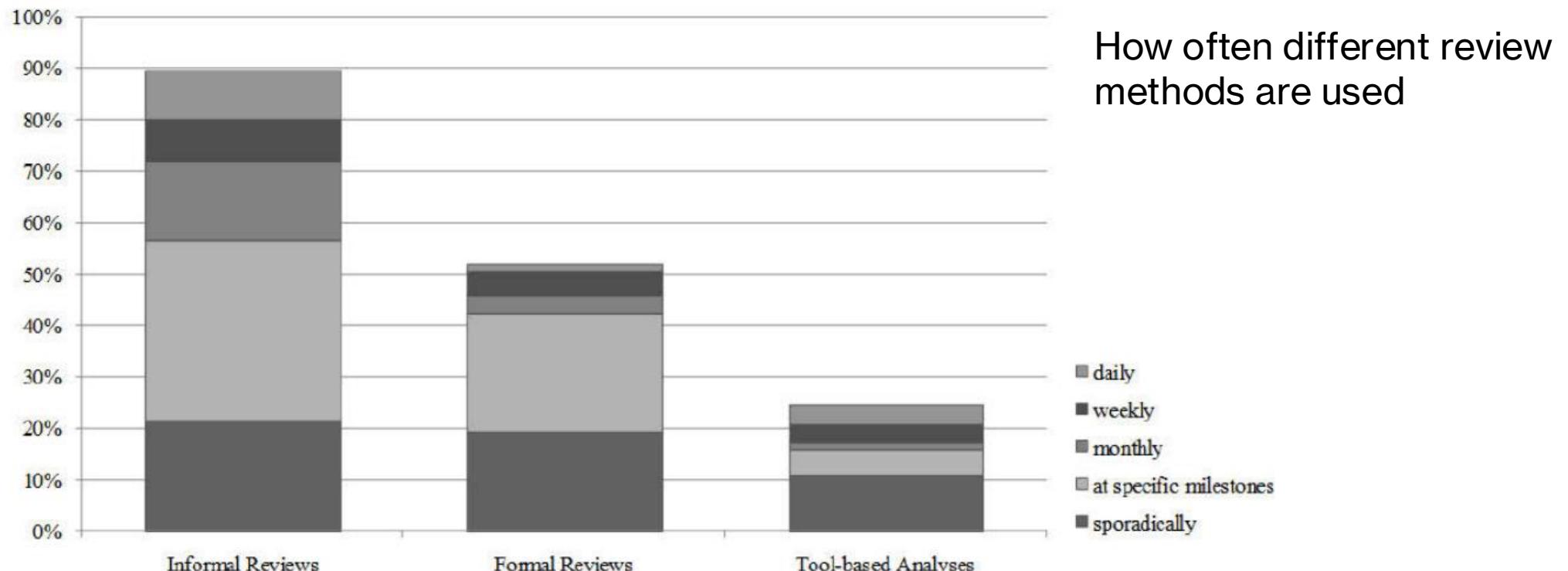


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Docs in Industry: Informally Reviewed

- "Formal review": any (human-conducted) review which uses a set of rules
- Otherwise: the (human-conducted) review is "informal"
- Both are time-consuming; there's a need for faster, automated tools



A Way Forward

- For the time being: practice "good documentation" as humans
- We need documentation skills transferable across different languages
- Solution: study general theories and frameworks

