

Design Documentation



SWEN-261 Introduction to Software Engineering

Department of Software Engineering
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Design documentation can be a valuable communication tool.

A design document is a way for you to communicate to others what your design decisions are and why your decisions are good decisions.

From [How to Write an Effective Design Document](#) by Scott Hackett

- Design documentation should be short and easy to read.
- It should communicate key architecture and design decisions.
- It should generally move from high-level to low-level.
- It should provide justification for design decisions.

We recommend a simple design document structure.

- Executive Summary
 - *Purpose*
 - *Glossary and Acronyms*
- Requirements
 - *Definition of MVP/MVP Features*
 - *Roadmap of Enhancements*
- Application Domain
 - *Overview of Major Domain Areas*
 - *Domain Area Detail*
- Architecture and Design
 - *Summary*
 - *Overview of User Interface*
 - *Tier Designs (Model-View-ViewModel)*
 - ◆ Summary
 - ◆ Static Models (e.g. UML Class Diagrams)
 - ◆ Dynamic Models (e.g. UML Sequence Diagrams)

These general tips for effective writing apply to your design documentation too.

- Create a narrative to engage the reader.
- Writing a spec is like writing code for a brain to execute.
- Write as simply as possible.
 - *Use the active voice.*
 - *Use short, declarative statements.*
- Review and reread several times.
- Balance text with diagrams.
 - *Don't have long stretches of text.*

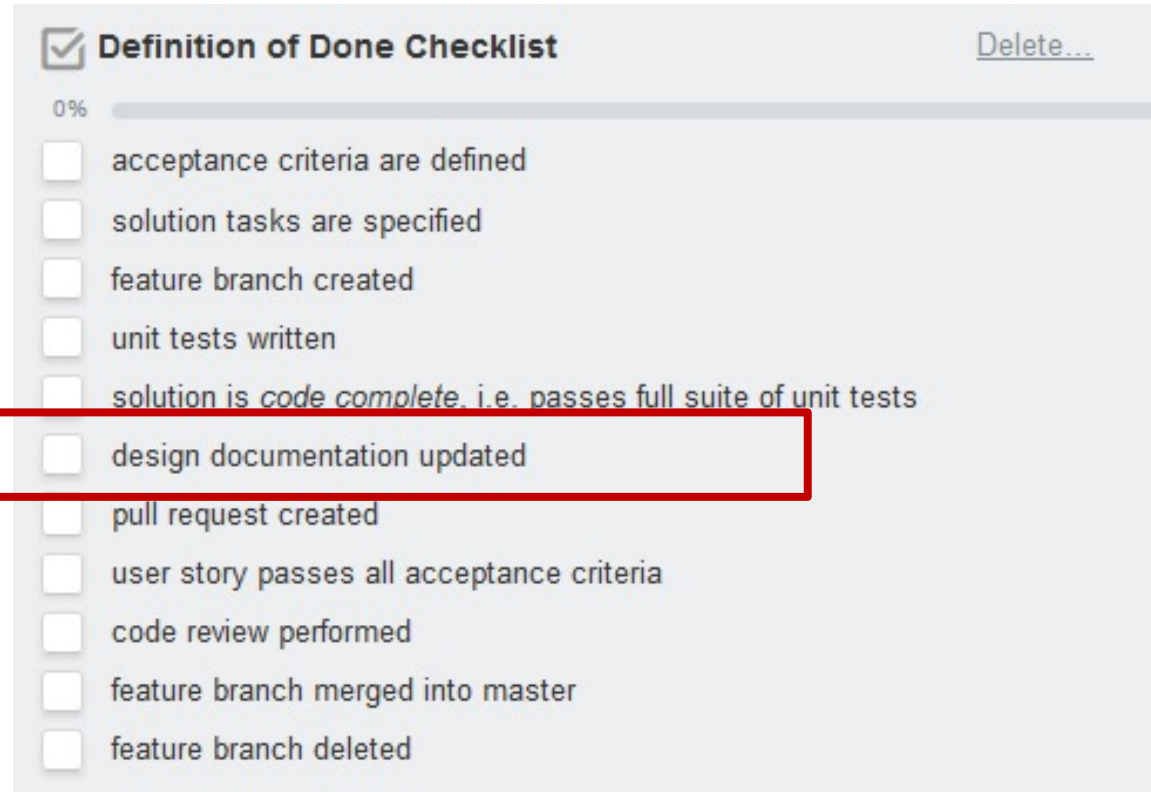
You should follow these tips to maximize the effectiveness and professionalism of your models.

- Define a purpose for each model/diagram and use a level of abstraction appropriate for the purpose.
- Use standard modeling techniques (ie, UML).
- Use non-standard models when they are clearer than the alternatives.
- Use a professional modeling tool.
- Create a layout that is easy to comprehend.
- Use color, fonts and styles that enhance understanding (high-light important elements)
- *BUT...* do not use such stylistic frills for solely aesthetic purposes.

The software design is just one aspect of a project that can be documented.

- Others include:
 - *Setup guide*
 - *UI and UX design and style guide*
 - *Acceptance test suite*
 - *Online and in-system help docs*
 - *Training docs and video tutorials*
- Project documents must *live*:
 - *Use collaborative, version-able documentation tools.*

Keeping your design documentation up-to-date will now be part of your standard workflow.



Definition of Done Checklist [Delete...](#)

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- acceptance criteria are defined
- solution tasks are specified
- feature branch created
- unit tests written
- solution is *code complete*, i.e. passes full suite of unit tests
- design documentation updated
- pull request created
- user story passes all acceptance criteria
- code review performed
- feature branch merged into master
- feature branch deleted