L05 Documentation

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Introduction

Learning Outcomes

After successful completion of L05
students will be able to

- remember basics of documentation
- generate documentation
- verify documentation

Correctness

Documentation tends to be:

- outdated
- incorrect
- not helpful

Make Sure That

- documentation gets reviewed
- documentation is in source code management
- small distance to code
- avoid redundant information

Different Types of Documentation

tutorials	in `doc/tutorials` for learning
how-to	solving a problem
goals	and/or use-cases “What?”
decisions	for background information “Why?”
explanations	in `doc/dev` and `doc/contrib` “How?”
reference	searching for details e.g. man pages, API docu
examples	for copy&paste

Different People

beginners	never forget everybody starts as beginner
advanced	understanding how to improve
expert	learn how to teach others, improve upon what the software is doing

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Generate

Markdown

Minimal formatting abilities but implemented by many tools

- `[Link](/linktarget)` or `[Link](relative/link)`
- `*italics*` and `**bold**`
- `` `inline code` `` or ```` ``` ```` code fences
- ```
  - item
  - item
  - item
  ```
  ```

Views

The same (markdown) file can be viewed via:

- directly viewing the source `doc/help/kdb.md`
- website `https://www.libelektra.org/manpages/kdb` (rendered by marked)
- API docu
  `https://doc.libelektra.org/api/master/html/doc_help_kdb_md.html`
  (rendered by doxygen)
- `man kdb` (rendered by ronn)
- `kdb -help` or `kdb help <command>`
- GitHub `https://master.libelektra.org/doc/help/kdb.md`
- From qt-gui (rendered by discount)

→ 5 different markdown renderer involved

Plugins

For plugins, documentation even changes the build process:

```
1 - infos = Information about the toml plugin is in keys below
2 - infos/author = Jakob Fischer <jakobfischer93@gmail.com>
3 - infos/licence = BSD
4 - infos/provides = storage/toml
5 - infos/needs = base64
6 - infos/recommends = type
7 - infos/placements = getstorage setstorage
8 - infos/status = experimental unfinished
9 - infos/metadata = order comment/# comment/#/start comment/#/s
10 - infos/description = This storage plugin reads and writes TOM
```

Conclusion

- reuse of documentation by generation
- avoids duplication and errors
- avoids CI checks for inconsistencies
- generation by CI

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Verify

Goals

Not every documentation-related task can be generated:

- in the text we want to refer to the behavior
- we want to verify if given examples are correct

Problems with Unit Tests

1. difficult to read
2. code cannot be directly copied (asserts)
3. cannot be easily integrated in tutorials

$\rightarrow$ specialized verification language for documentation

Verification of Tutorials

```
1 ____```sh
2 ____kdb␣set␣user:/tests/something
3 ____#␣RET:␣0
4
5 ____kdb␣get␣user:/tests/something
6 ____```
```

Syntax

1. starts with ```` ```sh ````
2. comments introduce checks
3. otherwise is shell code to be executed
4. `#>` verifies stdout output
5. `# RET:` verifies return code (if not 0)

Conventions

1. Test data in `/tests`.
2. Generate temporary files if needed or use HERE.

Conclusions

1. If possible, generate.
2. Otherwise, verify.
3. Keep user and purpose in mind.

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Meeting

Learning Outcomes

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Make Sure That

Task

What should you make sure as FLOSS maintainer in respect to documentation?

Make Sure That

- documentation gets reviewed
- documentation is in source code management
- small distance to code
- avoid redundant information

Make Sure That

Task

Which types of documentation do you need to treat differently?

Different Types of Documentation

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reference	searching for details e.g. man pages, API docu
examples	for copy&paste

Task

Break.

Views

Task

Which different views can be provided by generation of documentation?

Views

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Conclusions

Task

When do we generate, when do we verify, and for which users?

Conclusions

1. If possible, generate.
2. Otherwise, verify.
3. Keep user and purpose in mind.

Task

Break.

Organisation

Task

- Visit Consultation Hour (10:00–11:00) also for working together with tutor.
- Please mark activities in TUWEL.
- TUWEL no gradings visible while grading, check grades on Wednesdays.
- Get a Presentation Date.
- Mention&request review from @markus2330 and @flo91.

H3: Pull Requests: Fix Issues

Task

Any questions?

T1: Reviews

Semicolons macros removed? (e.g. #4710)

Task

Fix CI pipeline.

L06 Entry Barriers