Templates Hub for research communities

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Motivation

Software Engineering Best practices [e.g. 1-2]

1. Enhance Code Readability
2. Keep Code Efficiency
3. Test Your Code
4. Be Descriptive
5. Use Version Control
6. Refactor Your Code
7. Apply the KISS principle (Keep It Simple, Silly)
8. Apply the DRY (Don’t Repeat Yourself) principle
9. …

This is where **software templates** come very handy, e.g. to:

- set software project structure
- provide good code examples, including tests
- pre-set certain code functionalities
Tools to create templates

GitHub

Allow to create template repositories

Pro: easy to do
Contra: the generated code is not very customisable, basically a copy of the template repo

GitLab

A command-line utility (python package) that creates projects from cookiecutters (project templates)

Pro: very customisable templates (Jinja-based)
Contra: one has to install the cookiecutter tool locally

.. and in any case, it can be useful to collect interesting templates in one place ..
Templates Hub web service, running at https://templates.services.fedcloud.eu, is a collection of software templates (cookiecutters) where users can:

- list available templates
- choose a template of their interest
- generate software project based on the selected template:
  - simply fill out the corresponding web form and
  - receive zip file with the customized startup software project
Templates Hub: (current) Architecture

1. Reverse Proxy (traefik)
2. Frontend (nextjs)
3. Backend
4. Database
5. Letsencrypt Certificates
6. docker-compose.yaml + .env
7. GitHub repo
8. Add templates (PR)
9. Feedback (Issues)
10. EGI Checkin
11. Local buffer

Diagram shows the flow of components and interactions within the Templates Hub architecture.
Templates Hub: Web GUI (frontend) (demo)
Templates Hub: REST API (backend) (demo)
Templates Hub: adding new template entry

1. Fork this repository
2. (optional) Add a logo for your template, i.e. an image file in the `pictures/` directory or use one of the available
3. Create a new JSON file keeping convention `githubuser-cookiecutter_repository.json`
4. Fill the content following the example below
5. Commit your changes
6. Create Pull Request to add your new file in our repository

```json
{
    "title": "Template name",
    "summary": "Short summary",
    "tags": [],
    "picture": ""
    "gitLink": "https://github.com/user/repository",
    "gitCheckout": "branch"
}
```

NB: Github repo is also Helpdesk through Issues
Summary and Outlook

Templates Hub service is a collection of software templates, which can be used to generate new software projects through the web interface.

As next steps:

- Collect (user) feedback :-)  
- Add filtering by tags in the frontend  
- Review JSON key-value pairs  
- Add more software templates (cookiecutters)  
- Improve GitHub Issues  
- Service monitoring, backup, CI/CD …

Service:  
GitHub repo to add templates:  
GitHub issues:  

https://templates.services.fedcloud.eu  
https://github.com/m-team-kit/templates-hub  
https://github.com/m-team-kit/templates-hub/issues