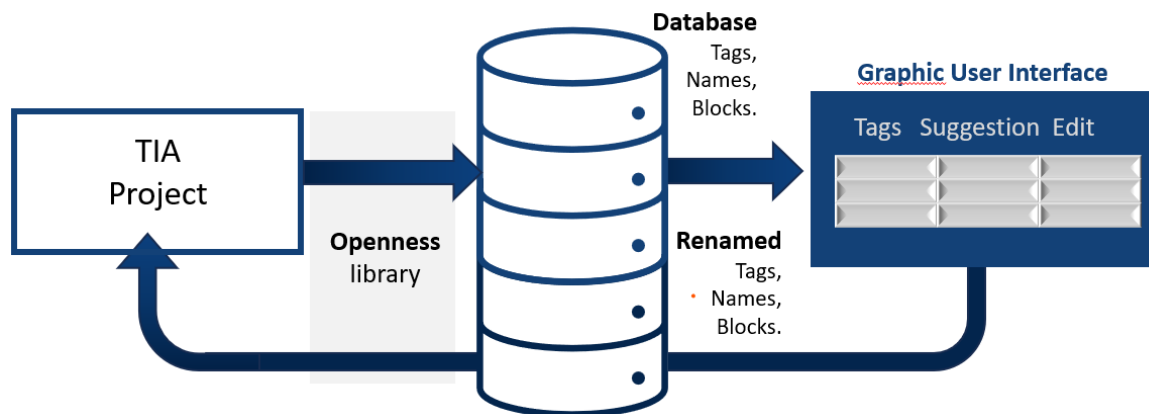


Naming Standardization for PLC and Automation Systems

Standardization of naming conventions is essential for automation and PLC (Programmable Logic Controller) projects to ensure consistency, clarity and efficiency at all stages of the project, from design to maintenance. Consistent naming maintains uniformity in documentation, code and hardware labelling, reducing errors and misunderstandings. This practice will also enhance the application of generative AI, as clear and consistent data is critical for fine-tuning large language models. A clear link between project software and documentation is essential for project insight and the generation of project databases, which have recently been used as input for LLM models. Therefore, this project will develop a tool to address naming issues by analyzing and renaming existing names in the project or documentation to ensure consistency throughout the workflow.



Goal and Tasks:

- Develop the tag and name renaming tool within the project workflow,
- Use Python and the Openness library to extract tag names from the TIA project,
- Automatically suggest new names for existing tag names - analyse the manual to suggest the most compiling names.
- Develop a graphical user interface to allow users to view and edit the suggestions.
- Ensure secure and consistent storage of new names in the TIA project via Openness.

Recommended Prior Knowledge:

- Basic programming skills, such as Python,
- Working with .dll libraries in Python
- Experience or interest in automation and PLC programming
- Experience of TIA Portal and Siemens PLC is preferred but not essential

Start: a.s.a.p.

Duration: 6-12 months

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