OpenBPT

A Research Platform for the BPM Community

Business Process Management (BPM) is an exciting field dedicated to improving organizational efficiency by developing new languages and techniques for understanding, analyzing, and automating business processes. Recent research has introduced a wealth of tools and approaches to expand the BPM knowledge base.

In response to these advances, the BPT Chair has initiated the development of OpenBPT - an extensible platform designed to provide a central hub for research and education in BPM. The platform aims to enable researchers and students to build their research on existing methods and tools. This will not only accelerate the development of new tools, but also make research results available to a wider audience. OpenBPT will also serve an educational purpose, bringing BPM theory to life by allowing students to experiment with the concepts they learn in lectures. Looking ahead, OpenBPT will provide robust support for model analysis, process simulation, and process mining to provide a comprehensive suite of BPM resources for both research and education that can be used by the international BPM community.

The proposed master project focuses on extending the model analysis capabilities of OpenBPT. Conceptual model analysis is an essential part of BPM to ensure the correctness and compliance of process models. Several analysis techniques have been proposed and discussed in the literature. Your task is to investigate, select and implement the most relevant model analysis techniques to make them accessible in OpenBPT. Possible areas of exploration include:

- Translating process models into formal representations
- Checking for process deadlocks and soundness
- Verifying control flow and data flow compliance
- Checking for structural and behavioral consistency between models

If you have any questions about the project, feel free to contact Tom Lichtenstein.

Contact

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