USING SOFTWARE COMPONENTS TO ANALYZE THE COMPLIANCE OF BPMN MODELS WITH TEXTUAL DESCRIPTIONS OF BUSINESS PROCESSES

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Business process modeling is a widely used technique for formalizing and visualizing business workflows. One of the most common modeling notations is BPMN (Business Process Model and Notation), which allows describing complex business processes in a structured graphical form [1]. However, real-world documentation and process descriptions are often presented in free-text form, which makes it difficult to automatically verify the correctness or completeness of BPMN models [2]. To address this problem, we propose the development and research of a software component for analyzing the compliance of BPMN models with textual descriptions of business processes.
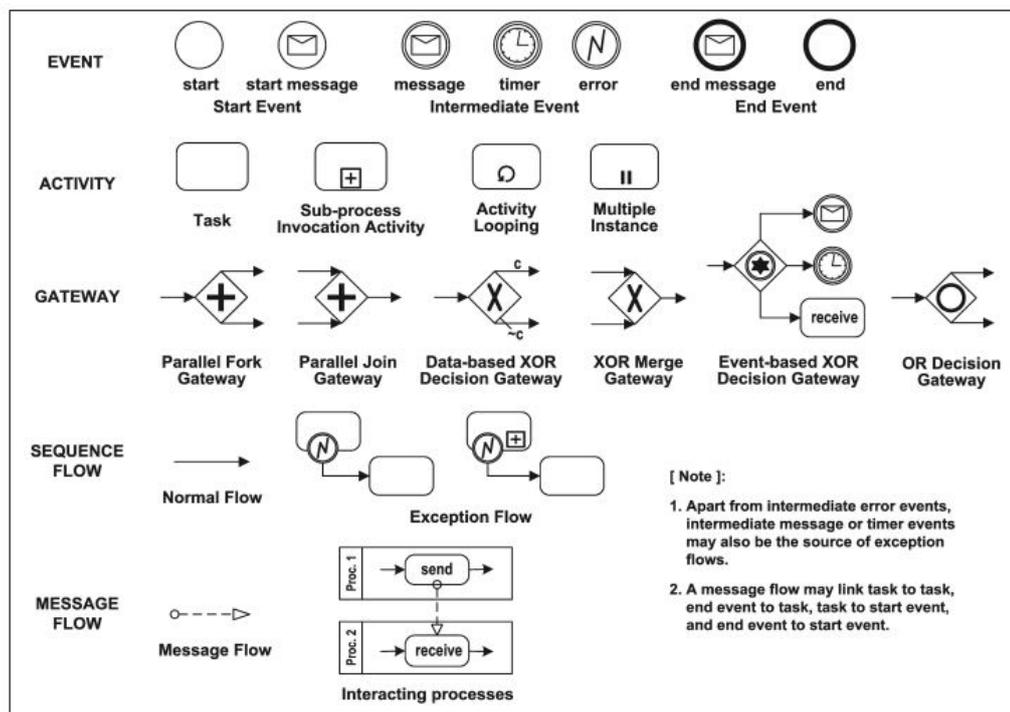

Fig. 1. – Overview of BPMN [1]

The proposed solution includes parsing the textual business process description using natural language processing (NLP) techniques to extract key process elements (such as participants, actions, sequences, and conditions). The BPMN model, typically stored in XML format (.bpmn), is also parsed to retrieve structural elements and logic of the graphical representation [1].

References:
1. Dijkman, R. M., Dumas, M., & Ouyang, C. (2008). Semantics and analysis of business process models in BPMN. Information and Software Technology, 50(12), 1281–1294.
2. Ghose, A. K., Koliadis, G., & Chueng, A. (2007). Process discovery from model and text artefacts. IEEE Services Computing Workshops (SCW), 167–174.