

TOWARDS COMPREHENSIBILITY EVALUATION OF BUSINESS PROCESS MODELS USING TEXTUAL ANALYSIS

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This study is devoted to solving the problem of assessing the quality of business process models, in particular, evaluating the comprehensibility of text labels in these models. The purpose of the work is to increase the understandability of text labels in business process models to improve the overall quality of these models. This problem is relevant, since poorly understandable business process models may cause errors when described workflows are executed, or when they are analyzed for process improvement. Moreover, such errors may decrease the performance of business processes if involved parties misunderstand required tasks and lead to monetary losses or even more dangerous consequences for critical business processes. Thus, to achieve the goal, it is necessary to create an algorithmic solution to solve the specified problem. In this work, the issues that existing studies did not resolve or did not reveal properly, and the main shortcomings of the existing software solutions that should solve the problem mentioned above are identified.

The proposed algorithm is based on the natural language processing techniques, such as tokenization and part of speech tagging. The proposed algorithm (Fig. 1) considers the recommended “verb-object” labeling style of activity text labels in business process models [1].

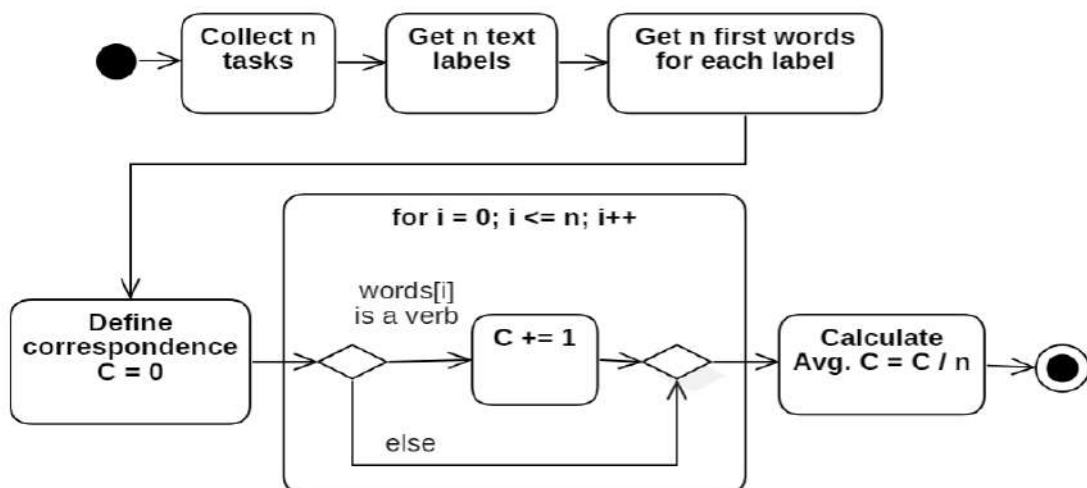


Fig. 1. – Algorithm for comprehensibility evaluation of business process models

The comprehensibility of sample business process models is evaluated using the Python implementation of the proposed algorithmic solution.

References:

1. Kopp A., Orlovskiy D., Orekhov S. Towards Understandability Evaluation of Business Process Models using Activity Textual Analysis. *CEUR Workshop Proceedings (CEUR-WS.org)*. 2022. Vol. 3312. P. 200–211.