RESEARCH ON INFORMATION TECHNOLOGY FOR BUSINESS PROCESS MODELS SIMILARITY ASSESSMENT

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This study considers the task of business process model similarity measurement, which is important for organizations handling large collections of business process models or looking for best practices, thus, facing the problem of searching for similar business process models in the large collections and repositories [1].

The proposed approach includes activity labels extraction from business process models and their further representation as the sets of tokens. Tokenized sets are then proposed to compare using the cosine similarity, or in terms of set similarity metrics, Otsuka-Ochiai coefficient (see Fig. 1) [2].

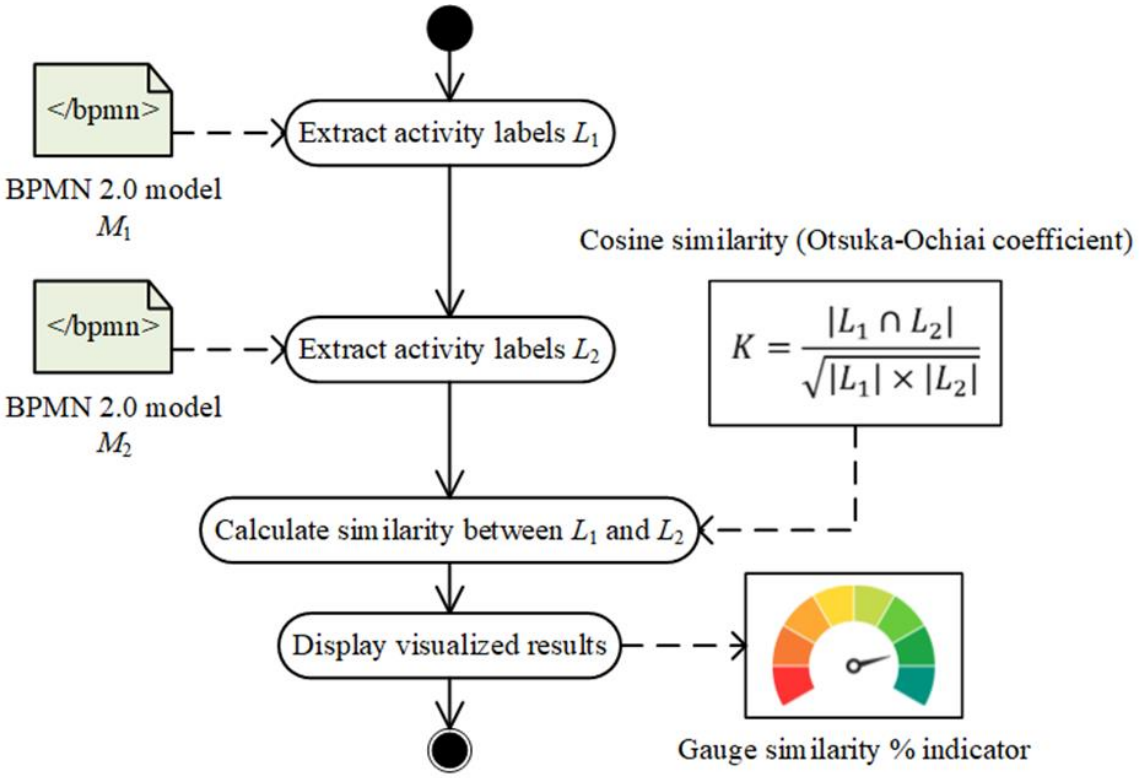

Figure 1 – The proposed algorithm of the information technology for business process model similarity measurement

As can be seen from Fig. 1, the obtained results should be then visualized using gauge indicator or similar display widget. The proposed solution will be used as the baseline for the future developed software tool.

References:

1. Kopp, A. M., Orlovskyi, D. L. An algorithm for NLP-based similarity measurement of activity labels in a database of business process models. *Bulletin of the National Technical University "KhPI". Ser. : System analysis, control and information technology*, 2023. No 1 (9). P. 54-59.

2. Nikoo M. S., Babur Ö., van den Brand M. Clone detection for business process models. *PeerJ Computer Science*, 2022. No. 8. e1046.