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## New assignment problem for decision making

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Abstract. In literature, many assignment problems are defined and studied. In this paper, we present a new multi-criteria assignment problem. The new problem has characteristics from the well known Bin Packing Problem (BPP) and Generalized Assignment Problem (GAP). The new problem will be called generalized assignment problem with identified first-used bins (GAPIFB). Similarities and differences between the BPP and GAP problems and our problem are discussed. The new GAPIFB problem will be presented as linear integer problem and will be integrated in decision-making tool.

## AMS Subject Classification (2000).

**Keywords.** Combinatorial optimization, Generalized assignment problem (GAP), Bin packing problem (BPP), Integer Programming, Decision-making.

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