# A NEW MODIFIED APPROACH USING BEST CANDIDATES METHOD FOR SOLVING LINEAR ASSIGNMENT PROBLEMS

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## ABSTRACT

There is an increasing awareness among modern business, engineers, managers, and planners to design and operate their systems even to minimize cost, or to maximum profit (maximum efficiency/business benefits). Accordingly, significant work has been done on business (specially, on manufacturing system) operations for total demand and on the optimal allocation of resources available. Linear Assignment Problems (LAP) is one of the most important optimization problem solving methods (in Operation Research) support this problem. This paper proposes a new modifications on the Best Candidates Method (BCM) and compares the proposed method with other Linear Programming (LP) methods in solving Linear Assignment Problems (LAP). In general, there are many development approaches for LAP to reach the optimal solution through minimize or maximize the objective function. Each problem solving technique (method) has its own time complexity, and solution optimality. Some methods can be used successfully when dealing with small scale problems, while they considered as an inefficient method when solving large scale problems. Performance of different LAP problem solving methods is presented because of their wide used in different area of optimization problems. We introduce our new modifications on BCM in solving LAP problems which has significant improvements in the number of combinations and searching strategy.