

## A New Graph Theoretic Problem with Ample Practical Applications

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**Abstract :** In this paper, we first coin a new graph theoretic problem with numerous applications. Second, we provide two algorithms for the problem. The first solution is using a brute-force techniques, whereas the second solution is based on an initial identification of the cycles in the given graph. We then provide a correctness proof of the algorithm. The applications of the problem include graph analysis, graph drawing and network structuring.

**Keywords :** algorithm, cycle, graph algorithm, graph theory, network structuring

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