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FLUID FLOW SOLUTION IN REGULAR GEOMETRY

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ABSTRACT

A computer code has been developed for regular geometry. SIMPLE algorithm based on finite volume method on staggered grid has been used. Deferred QUICK scheme have been implemented for all calculations. A standard code is used for lid driven cavity. This code can be used for mean flow solution of the problem i.e. U and V can be obtained after modifying the code for boundary condition at the left wall for the given problem. The computational results for lid driven cavity problem are compared with benchmark solution for Re = 100, 400, 1000, 3200, 5000 and Pr = 0.71. The results are very good agreement with benchmark solution.

KEYWORDS: Reynolds Number, Lid Driven Cavity, Benchmark Solution, Regular Geometry

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