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V I, J V I, J - DT * U I, J * V I+1, J - V I-1, J / 2*DX
V I, J * V I, J+1 - V I, J-1 / 2*DY

END DO

END DO

END SUBROUTINE COMPUTE VELOCITY

FUNCTION TO SOLVE FOR PRESSURE SIMPLIFIED POISSON EQUATION SOLVER

SUBROUTINE UPDATE PRESSURE P, DX, DY

REAL, DIMENSION , , INTENT INOUT P

REAL, INTENT IN DX, DY

INTEGER I, J

SIMPLE PRESSURE POISSON EQUATION JACOBI ITERATION

DO I 2, N-1

DO J 2, N-1

P I, J 0.25 * P I+1, J + P I-1, J + P I, J+1 + P I, J-1

END DO

END DO

END SUBROUTINE UPDATE PRESSURE

END PROGRAM LID DRIVEN CAVITY