Step-1

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For $Ax = b$ with $A = ones(4,4)$ is a singular matrix and so not invertible.

So, considering b = rand (4, 1), to find the solution through MATLAB, it considers

$x = A^{-1}b$ which does not exist.

So, obviously it displays that $Ax = b$ has no solution.

Step-2

By putting b = ones (4, 1), the system reduces to one non zero row and all other rows zero in A/b.

So, it will pick x = (1, 0, 0, 0) and pinv (A) * b and the shortest solution $x = (1,1,1,1)/4$