COMPARISONS BETWEEN JACOBI METHOD, GAUSS SEIDEL METHOD AND SUCCESSIVE OVER RELAXATION METHOD

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ABSTRACT

In numerical analysis there is a system of linear equations which is form from just a set of two or more linear equations. Iterative methods formally produce the solution of a linear system after an infinite number of steps. Iterative methods can be competitive with direct methods as it provided the number of iteration that are require to converge either independent of n or scale or scales sub linearly with respect to n.

For instances of large sparse matrices, direct methods may be disadvantageous due to the sudden replacement, although exceptionally competent direct solution can be come up with sparse matrices recommending special differential equation. Iterative methods are made achievable by preconditioning techniques that will be address in this project. The iterative methods that will be evaluated in this project are Jacobian method, Gauss Seidel method and Successive Over Relaxation method.

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