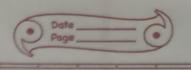
Keish gusabonis 21/12/2021 23BCEITSO3 Date Page Tutorial 2 The gary - Elimination Hethod is a direct method to solve a system of a linear equation with a unknowns. The method transforms the system into an upper triangular form and then applied back substitution to find the solution -Limitation (i) Round off error. Pivoning inuer (34 pivot=0 or pivor near o (iii) Computational costs: This method involves of (413) operation, making it Computationally expensive for large systemi. (iv.) static system: (annot handle systems with dynamically changing coefficients Comparision with Heraine methode. Trevative Melliode gaus climination Computational Costs O(n2) O(n3) Accuracy lan actorive tensitive to round derived precision aff errors Les efficient for Scalable and Scalability. Officient for large System large I systems.



92-)(a) condition for Diagonal Dominance

for a system of linear equations supresented

by Ax = b, the coefficient matrix A is diagonally

dominant if for every show i:  $|aii| \geq \sum |aii|$ 

with strict inequality air > Elaij

How it ensure ette convergence of your - Scidel: Plagonal dominance ensure that the stevative updates do not diverge Each new estimate of Hu variable depends more on it coefficients and less on the other variables promoting stability. In a your leidel, this condition helps of the offdiagonal terms are small compared some.

		the state of the s
(6)	comparision of Jacobi and gause - Stidel	
	method.	
	Jacobi	gauss Serdel method
(E)	updatts variable	Updater værrabber segnentrolly.
0	Simultaneously	
<b>A</b>	Mowex convergence	Faster convergence due to
		immediate use of updated
	compared to exams-	values.
	Seidel	
6	A	Converges under milder
(3)	strong diagonal	conditione.
	dominance	