

## ASSIGNMENT - 7

NAME: ABHIK SARKAR

MATRIKELNUMMER: 23149662

IDM Id : lo88xide

EMAIL: [abhik.sarkar@fau.de](mailto:abhik.sarkar@fau.de) / [abhik.sarkar.718@gmail.com](mailto:abhik.sarkar.718@gmail.com)

## ANLA ASSIGNMENT - 6

### Exercise - 3

(a) Preconditioner is used to improve the convergence of iterative methods for solving bigger linear systems of equations.

The preconditioner which has been applied in the script `krylov-comparison.py` is a matrix that is only containing the diagonals of the matrix  $A$ .

(b) The implementation of magic matrix is considered bad as the preconditioner is applied in an inefficient manner.