CE5310 Numerical Methods

Homework #06

1.) Write a MATLAB Program to perform Faddeev-Leverrier method and use it to solve the following problem. Compare your results to the `eig()`function in MATLAB.

$$[A] = \begin{bmatrix} 5 & 4 & 1 & 1 \\ 4 & 5 & 1 & 1 \\ 1 & 1 & 4 & 2 \\ 1 & 1 & 2 & 4 \end{bmatrix}$$

2.) Write a MATLAB Program to perform the Inverse Power method and use it to the following problem. Compare your results to the `eig()` function in MATLAB.

$$[A] = \begin{bmatrix} 2 & 1 & 1 & 0 \\ 1 & 1 & 0 & 1 \\ 1 & 0 & 1 & 1 \\ 0 & 1 & 1 & 2 \end{bmatrix}$$

Deliverables:

1) A pdf including a title page, the problem statement, all m-file listings and example input and output. Preferably bookmarked.
2) All m-files, loaded separately, required for your solution to run.

Grading:

Your solution will be graded based on completion of the above requirements, correct performance, neatness and professionalism of pdf submittal.

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