exercise3 (Score: 0.0 / 12.0)

1. Task (Score: 0.0 / 12.0)

(Top)

Exercise 3

Analyse the convergence properties of the Jacobi and Gauss-Seidel methods for the solution of a linear system whose matrix is

$$\left[\begin{matrix}

```
\alpha &&0 &&1\\
0 &&\alpha &&0\\
1 &&0 &&\alpha
\end{matrix}\right],
\quad \quad
\alpha \in \mathbb{R}.$$
```

Please write down your analysis in detail with LaTeX/Markdown at here. And if you need to do some numerical experiments, you can add more blocks to test your codes at below.