Pivoted LU

1分

Factor the matrix

$$A = \begin{bmatrix} 0 & 2 & 1 \\ 1 & 1 & 3 \\ 2 & 4 & 4 \end{bmatrix}$$

into a permutation matrix P, a lower triangular matrix L, and an upper triangular matrix U.

Here are a few reminders about the process (so that you don't have to go look these up):

- Original factorization: $M_2 P_2 M_1 P_1 A = U$
- $L_2 = M_2$
- $L_1 = P_2 M_1 P_2^{-1}$
- $L = L_1^{-1} L_2^{-1}$
- $P = P_2 P_1$

评分代码 (点击查看)

起始代码 (点击查看)

回答*

```
import numpy as np

P = np.zeros((3,3), dtype=np.float64)
P[   , 0] = 1
P[   , 1] = 1
P[   , 2] = 1

L = np.array([
    [1, 0, 0],
    [ , 1, 0],
    [ ,  , 1],
    ])

U = np.array([
    [ ,  ,  ],
```

按F9以打开/关闭全屏模式. 在 用户信息 (/profile/) 中设置编辑器模式.

保存回答 提交用于评分的回答

(您仍然可以在提交**本问题**后修改回答)