LAB 8: Compute Eigen values and the corresponding Eigen vectors. Find dominant and corresponding Eigenvector by Rayliegh power method.

Write a program to

1. Obtain the Eigen values and Eigen vectors for the given matrix $\begin{bmatrix} 4 & 3 & 2 \\ 1 & 4 & 1 \\ 3 & 10 & 4 \end{bmatrix}$

2. Compute the numerically largest Eigen values of $P = \begin{bmatrix} 6 & -2 & 2 \\ -2 & 3 & -1 \\ 2 & -1 & 3 \end{bmatrix}$ by power method.