For homework you can implement a solution where you keep 4 components for the PCA, instead of the 3 proposed in the lecture.

You can examine the difference between the two solutions. How much of the variance will you maintain if you decide to keep 4 components? What are the advantages and disadvantages between the two approaches?

Here, we will not provide you with an explicit solution for the approach, as our whole consequent course is based on the 3 components solution.

However, you can complete the course with the 3 components solutions and then come back to this lecture and complete the rest of the course using with the 4 components solution, instead. This would be a great exercise to solidify your understanding of the Customer and Purchase analytics with Python.

Just keep in mind that in lecture 27 you might want to export the files by saving them under a different name, to avoid any confusion.

Good luck!