Q1. Read the textbook Chapter Page 21-40. (5 points)

Q2. Write your own code of K-means clustering. Do not copy online codes. Test it on iris dataset, calculate the NMI. (15 points)

Q3. Write your own code of K-nearest neighbor classifier. Do not copy online codes. Test it on iris dataset, calculate the accuracy. (15 points)

Q4. Conduct SVD on $A = \begin{pmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 0 & 1 \end{pmatrix}$. (15 points)

Here is the link for iris dataset.