README:

1. The assignment is compressed in .tar file. You need to unzip it first to view the document. Inside the folder, there are 5 separate codes (.ipynb) format, one report (.PDF) and one README file (.PDF)

#PRE_REQUISITE TO RUN THE CODE.

1. You need to have Jupyter Notebooks to run .ipynb file. The best way to do is by installing Anaconda. Anaconda is the most widely used Python distribution for data science and comes pre-loaded with all the most popular libraries and tools.
   a. Download the latest version of Anaconda for Python 3.8.
   b. Install Anaconda by following the instructions on the download page and/or in the executable.
2. If you are a more advanced user with Python already installed and prefer to manage your packages manually, you can just use pip: **pip3 install jupyter**
3. You need to upload the file in current directory of your Jupyter Notebooks to run the code.

THINGS TO DO IN THE CODE.

1. In all the file (.ipnyb) there is a function called main(). In the main function you need to change only the value of K to get different number of clusters as well as neighbor.
2. The 1st file is "Problem 1.2 Kmeans Clustering.ipynb", you need to change the k value in the main() function.
3. The 2nd file is "Problem 1.3 Kmeans Clustering.ipynb", you need to change the k value in the main() function.
4. The 3rd file is "Problem 2.1 KNN Classifier.ipynb", you need to change the k value in the main() function.
5. The 4th file is "Problem 2.2 KNN regression.ipynb", you need to change the k value in the main() function.
6. The 5th file is "Problem 2.3 Locally Weighted Regression.ipynb", you need to change the k value in the main() function.