BDMH PROJECT READ ME
THYROID PREDICTION USING DATA MINING TECHNIQUES

Steps implemented:
To replicate the result the following libraries should be downloaded:

1. Matlpotlib: For plotting graphs
2. Sklearn: For ML related tasks
3. Numpy: For handling data
4. Pandas: For handling data

Back End code

1. Loading the data to the script. (Location of the data should be modified according to folder where you have downloaded the dataset files)
2. Read data is stored in the dataframes.
3. Data visualisation is performed.
4. Pre-processing is done on the data.
5. Normalization and feature selection (top 5 features) are selected.
6. To replicate the results just run the cells in a sequential manner.
7. Various models have been implemented.
   Models implemented are:
    1. k-Nearest Neighbour
    2. Decision Tree
    3. Naive Bayes
    4. Multilayer Perceptron
    5. Keras Sequential

8. Make sure to run the common cell containing all the libraries of classifiers.
9. To run a particular classifier run the 3 cells corresponding to it
    a. Training cell
    b. Testing and Evaluating cell
    c. Cell to print all the evaluation metric's values

Front End code
In order to run the web application, make sure the flask library is installed.

1. Cd <thyroid folder i.e. the folder containing all the code of front end files>
2. Export FLASK_APP=script2.py
3. Flask run

Copy the link on your browser.

1. The home page would open.
2. To navigate to any page use the navigation bar at the upper left corner.
3. Following pages are available
    - Home page
    - Introduction: A brief introduction about thyroid and our project

- Form: A form to enter the values of the for prediction.
- Help: Help page contains information about the values to be entered in the form
- Result: On submitting the values the form would be transferred to the result page which would display the prediction result.
- Our Team: Information about all the team members.