COMP47750/COMP47990 Tutorial
Spectral Clustering

1.

The *19 Clustering Tutorial* notebook provides code for spectral clustering on a synthetic half-moons dataset. The code uses 'nearest_neighbors' for affinity; modify the code so that it uses 'rbf'. This option will not produce a great clustering without adjusting other parameters. Adjust the 'gamma' and 'n_neighbors' parameters to improve the quality of the clustering.

2.

Spectral Clustering is a two stage process with the first stage being a projection of the data into an embedded space defined by the eigenvectors of the Laplacian matrix representing the data. The second stage is to produce cluster assignments (labels) from this embedding; what is the default way to do this in the **scikit-learn** implementation?

https://scikit-learn.org/stable/modules/generated/sklearn.cluster.SpectralClustering.html

Hint: The key parameters are `n_components` and `assign_labels`.