Q1) Implement Naïve Bay’s classifier and use the data set have been used in task 1 for test your implementation

Q2) Compare the Naïve Bay’s classifier results with back-propagation classification. The comparison must have the following information:

1. Running time for each classifier
2. Classification rate for each model including (TP= true positive, TN=true negative, FP=false positive, FN=false negative)
3. Test sample classification results

Q3) Naïve Bay’s classifier can be used for image segmentation task. Use the following image as a test sample for classifying the three classes

* Class 1: apple class
* Class 2 leaf class
* Class 3 background

The task will be handled as follows:

1. Open the image use any suitable tool (Matlab)
2. Select 100 sample pixels randomly form different location of the image and get the R.G.B values as a feature vector
3. Manually add a label for each selected pixel
4. Start learning the classifier and test it for each pixel of the image
5. Extract 3 different image for each class

