Answer each question in Matlab or Python

Python users: you may use numpy (import as np) and pandas (import as pd); if you use other modules, let me know what they are and how you import them.

1) Write a function **magnitude** that takes in a vector/list/numpy-array and outputs the magnitude of the vector.

Assume we have a matrix/list/numpy-array called **Data** which contains 1000 data points, each with 6 features and 1 classifier label.
For matlab/numpy, **Data** has 1000 rows and 7 columns (last column is label). For python list, **Data** is a 1000 element list, with each element being a 7-element list.

2) Write code to separate **Data** into two variable **DataFeats** and **DataLabels**, a matrix of 1000 x 6 features and a vector of 1000 labels respectively.

3) Presume there is a classifier function called **classify** that takes in the features for a single data point and outputs the corresponding class.
Write code to compute the accuracy of **classify** function’s output across the 1000 data points.
(Classify syntax: **classify(featureVec)**).