Practice Lab: Decision Trees

In this exercise, you will implement a decision tree from scratch and apply it to the task of classifying whether a mushroom is edible or poisonous.

Outline

1 - Packages

First, let's run the cell below to import all the packages that you will need during this assignment.

- numpy (https://www.numpy.org) is the fundamental package for working with matrices in Python.
- matplotlib (https://matplotlib.org) is a famous library to plot graphs in Python.
- `utils.py` contains helper functions for this assignment. You do not need to modify code in this file.

In [2]:
```
import numpy as np
import matplotlib.pyplot as plt
from public_tests import *
from utils import *

%matplotlib inline
```

2 - Problem Statement

Suppose you are starting a company that grows and sells wild mushrooms.

- Since not all mushrooms are edible, you'd like to be able to tell whether a given mushroom is edible or poisonous based on it's physical attributes
- You have some existing data that you can use for this task.

Can you use the data to help you identify which mushrooms can be sold safely?

Note: The dataset used is for illustrative purposes only. It is not meant to be a guide on identifying edible mushrooms.

3 - Dataset

You will start by loading the dataset for this task. The dataset you have collected is as follows:

	Cap Color	Stalk Shape	Solitary	Edible
	Brown	Tapering	Yes	1
	Brown	Enlarging	Yes	1
	Brown	Enlarging	No	0
	Brown	Enlarging	No	0