Make sure you have the tutorial open when answering the following questions. All of the questions in this module use the Python Tutorial at:

* <http://www.letslearnpython.com/learn/>

Note: You should use the black area of Repl to try the simple Python expressions listed in the questions below.

**Lesson 8: Lists – A Collection of Objects**

1. What is a list in Python? Explain in words and provide an example.
   1. In python, a list is a collection of strings, integers and floats.
2. Create a list of your favorite sports teams.
   1. Assign your list to a variable. Called “myTeams”
      1. myTeams = [‘Toronto Maple Leaves’, ‘Toronto Raptors’]
   2. Use the command print(myTeams) to confirm that your variable and your list are the same.
      1. Confirmed.
3. Add a team to your list using “+”.
   1. Verify that + can be used to add two lists
      1. Confirmed
   2. Write you Python code below

myTeams = ['Houston Rockets', 'Toronto Raptors’, ‘Fc Barcelona'

myFruits = ['apples', 'mangos', 'strawberries']

myTogether = myFruits + myTeams

print(myTogether)

1. Create a list containing your favorite colour, your favorite number, and the name of someone you know. Show how to write this list in Python code below.
   1. myEverything = [‘Blue’, 10, ‘Zain’]
2. Do Python lists have to contain elements that are all the same data type? Answer True / False.
   1. False.

**Lesson 8: Lists – List Indexes**

1. What is the value of myTeams[0]? (Assuming that you have created a list of your favorite sports teams in the previous questions.)
   1. myTeams = [‘Houston Rockets’, ‘Toronto Raptors’, ‘Fc Barcelona’]

The value of myTeams[0] is Houston Rocket.

1. What is the list index of the last team in your list of favorite sports teams? Provide the Python code below.
   1. myTeams = [‘Houston Rockets’, ‘Toronto Raptors’, ‘Fc Barcelona’]

The list index of the Toronto Raptors in the list is 1.

1. Compare Python lists to Python strings.
   1. How are lists and strings similar?
      1. Python strings can be put into python lists.
   2. How are they different?
      1. The string can be changed inversely throughout the code.
2. In the tutorial, why does typing “fruit[3]” produce an error?
   1. It produces an error since there is nothing in the 3rd index of the list, it is out of range.

**Lesson 10: Loops – Counted Loops**

1. Use a counted loop to print out your list of favorite sports teams. Provide your code below.
   1. What is the function of “in”
      1. The ‘in’ function declares what the for loop variable will equal each round.
2. Compare Counted Loops to Conditional Loops.
   1. How are they similar?
      1. They are similar since they are both loops and repeat.
   2. How are they different?
      1. The conditional loop continues only until a certain condition is met, the for loop only runs until the list in the ‘in’ function is complete.