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.

- Just like all those everyday lists, a list in Python is just a collection of things for example, grocery list, chores list, or maybe a party list.

- A list can contain different kinds of objects, such as strings, integers and floats. For example, ["pizza", "fries", 3, 2.5, "donuts"]

1. Create a list of your favorite sports teams.
   1. Assign your list to a variable. Called “myTeams”

myTeams = ["Raptors", "Blue Jays", "Manchester United"]

* 1. Use the command print(myTeams) to confirm that your variable and your list are the same.

-myTeams = ["Raptors", "Blue Jays", "Manchester United"]

print(myTeams)

1. Add a team to your list using “+”.
   1. Verify that + can be used to add two lists
   2. Write you Python code below

-myTeams = ["Raptors", "Blue Jays", "Manchester United"]

print(myTeams)

myNumbers = ["0", "1", "2"]

print(myNumbers)

together = myTeams + myNumbers

print(together)

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.

myColour = ["Green"]

myNumber = ["7"]

myPerson = ["Messi"]

MyFavorites = myColour + myNumber + myPerson

print(MyFavorites)

1. Do Python lists have to contain elements that are all the same data type? Answer True / False.

- Its False because you can have a mix on numbers, teams, letters, colors and many more. You can also create a variable but put something irrelevant in the variable. For example:

myColor = ["1","Messi"]

**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.)

myTeams = ["Raptors", "Blue Jays", "Manchester United"]

- The value of MyTeams[0] = “Raptors”

1. What is the list index of the last team in your list of favorite sports teams? Provide the Python code below.

myTeams = ["Raptors", "Blue Jays", "Manchester United"]

- The index of the last team on myTeams is [2]

1. Compare Python lists to Python strings.
   1. How are lists and strings similar?

- Python strings can be put into Python lists.

* 1. How are they different?

- The string can be changed throughout the code.

1. In the tutorial, why does typing “fruit[3]” produce an error?

- It produces an error because there is nothing in the 3rd index of the list, it’s 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”

- The “in” Function decides what the variable for the loop will equal each round

1. Compare Counted Loops to Conditional Loops.
   1. How are they similar?

- They are similar since they are both loops and they both repeat.

* 1. How are they different?

- The conditional loop continuers only until a certain condition is met, for the loop only runs until the list in the “in” functions is complete.