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.

A list can contain different kinds of objects, such as strings, integers and floats Python is just a collection of things ["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", "Messi", "Blue Jays", "Ronaldo"]

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

myTeams = ["Raptors", "Messi", "Blue Jays", "Ronaldo"]

print(myTeams)

1. Add a team to your list using “+”.
   1. Verify that + can be used to add two lists

['Raptors', 'Messi', 'Blue Jays', 'Ronaldo']

['1', '2', '3', '4']

['Raptors', 'Messi', 'Blue Jays', 'Ronaldo', '1', '2', '3', '4']

* 1. Write you Python code below

myTeams = ["Raptors", "Messi", "Blue Jays", "Ronaldo" ]

print(myTeams)

myNumbers = ["1", "2", "3", "4"]

print(myNumbers)

myTogether = myTeams + myNumbers

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.

MyEverything = [“Blue”, 8, “Zack”]

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

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.)

myTeams = ["Raptors", "Messi", "Blue Jays", "Ronaldo" ]

**the value of myTeam[0] is “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", "Messi", "Blue Jays", "Ronaldo" ]

**the index of the last team in my list of favourite sports team is “3”**

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 thout the code

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

They have only three items in the list. If Python starts counting at 0, then the only indexes (or *indices*) they have would be 0, 1, and 2.

So there is no index 3 in their fruit list. Python lets you know that with an IndexError.

**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 says what the for loop variable will equal each round

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

They are similar because they are both loops and repeat

* 1. How are they different?

Only runs until a certain condition is met, the for loop only runs until the list in the “in” function is complete