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 is a series of things in square brackets

Example; [strawberries, bananas, pineapple]

1. Create a list of your favorite sports teams.
   1. Assign your list to a variable. Called “myTeams”
   2. Use the command print(myTeams) to confirm that your variable and your list are the same.
2. Add a team to your list using “+”.
   1. Verify that + can be used to add two lists
   2. Write you Python code below

>>myteams=[“bluejays”,”raptors”]

>>fruits=[“strawberries”,”bananas”]

>>myteams+fruits

>>[‘bluejays’, ‘raptors’, ‘strawberries’, ‘bananas’]

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.

>>favourite=[“purple, 2, “Ajay”]

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

false, a python list does not have to contain the same data type for it to work.

**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[0]

>>’bluejays’

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

>>myteams[1]

>>’raptors’

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

Strings and lists can have an assigned word for it, allowing you to use the word instead of the string itself.

* 1. How are they different?

Lists can have several things assigned to one word, but in strings only one thing can be assigned to a word.

Example,

>>mynumbers= 6

>>mynumbers={6,9,0,2,3,5,6,73]

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

Because there is no 3 index therefore making an error because the index 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”
2. Compare Counted Loops to Conditional Loops.
   1. How are they similar?

Counted loops and conditional loops will continue until they reach an untrue point/run out of indexes

* 1. How are they different?

Conditional loops will continue as long as the while statement is true. But counted loops will only go as far as the indexes.