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

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.

myTeams = ["Blue Jays", "Toronto FC", "Barcelona"]

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 = ["Blue Jays", "Toronto FC", "Barcelona"]

teams = ["Real Madrid"]

print(myTeams + teams)

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.

things = ["Blue", "10", "Krish"]

print(things)

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.) Blue Jay value is 0
2. What is the list index of the last team in your list of favorite sports teams? Provide the Python code below.

print (myteam[2])

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

 but they are not same and many people don't know the main difference between a string and a list in python. One simple difference between strings and lists is that lists can any type of data i.e. integers, characters, strings etc, while strings can only hold a set of characters

* 1. How are they different?

In Python programming, a list is created by placing all the items (elements) inside a square bracket [ ], separated by commas. A string in Python is a sequence of characters. It is a derived data type. Strings are immutable. This means that once defined, they cannot be changed.

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

The end quotations are behind the bracket

**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”

for myTeams in ["Blue Jays", "Toronto FC", "Barcelona"]:

print("choosen Team is", myTeams)

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

*Conditional* loops repeat until something happens (or as long as some condition is True). *Counting* loops repeat a certain number of times - they keep going until they get to the end of a list.

* 1. How are they different?

A conditional statement in Python is handled by if statements and we saw various other ways we can use conditional statements like if and else over here. *Counting* loops repeat a certain number of times - they keep going until they get to the end of a list.