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 4: Strings – Strings and Lesson 4: Strings – Examples**

1. What is a string? Explain in words and provide an example.

A string a piece of text which uses variables to give meaning towards the text within a program

1. Explain why typing “apple” works and why typing apple without quotes gives an error.

Python doesn’t detect apple as a piece of text and instead as a variable, meaning since there is no apple variable, the program cannot run it, if you attempt this with quotes instead, python detects it as a line of text and repeats it to you

1. Is there a difference between typing “apple” and ‘apple’. (i.e. is there a difference between using single or double quotes.

There is no difference, as both produce the same result, and python accepts both interchangeably

1. Explain why typing “apple’ gives an error.

Due to the quotation marks being different (Single and Double), it creates an incorrectly formated line of text which python cannot recognise and instead decides to call it incorrect

1. Explain why “2 + 5” does not equal 7 and how it is different from typing 2 + 5.

Because its a line of text created via the sue of the quotation marks

**Lesson 4: Strings – Operators**

1. Type “appl” + “e” and explain what it does. Why do you think this works?

It simply adds the e towards the already existing text of “appl” in order to form a word with the equation

1. Type “apple” - “e” and explain what it does. Why do you think this gives an error?

You cannot subtract strings, python does not allow it

1. Type “Hello” \* 10 and explain what it does. Why do you think this works?

It simply repastes the text multiple times, this is very simple for a program to do, and very quick

1. Type “Hello” / 10 and explain what it does. Why do you think this gives an error?

You can’t divide text by umbers or anything for that matter, meaning this statement is invalid

1. The ***concatenation*** operator (+) is very useful for working with strings. Explain ***concatenation*** with words and examples.

You can use the (+) operator in order to add either two strings or integers together in order to produce results which are the sum of the two numbers (3 + 3 = 6 or “hell” + “o” = hello)

**Lesson 4: Strings – Indexes and Lesson 4: Strings – Indexes Examples**

1. Create a string using the letters in your first name and write down the ***index*** number for each letter.

print (“Niyam”)

0 = N 1 = i 2 = y 3 = a 4 = m

1. Explain why print(“Hello!”[4]) does not print “l”.

Since python detects text starting from 0, H is actually detected as 0 and both Ls are detected as 2 and 3 respectively

1. What does print(“Hay, Bob!”[4]) print? For a hint try print(“Hay, Bob!”[3]) and print(“Hay, Bob!”[5])

This prints a blank space “ “ which python detects as text, but is in fact not text

1. Answer True or False: “String indexes in Python begin at 0”. Do you need to know the reason for this or do you just need to remember this?

False, knowing the reason for this would be helpful in future endeavors, but for now it doesn’t really matter

**Lesson 5: Variables**

1. Complete “Lesson 5: Variables – Save a Value” by typing the sample commands in the black area of the IDE.
   1. What do you get if you type puppies / 3?

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* 1. Why doesn’t typing kittens / 3 work?

Kittens doesn’t have a variable set for this program

1. Complete “Lesson 5: Variables – Math Operators” by typing the sample commands in the black area of the IDE.
   1. Explain what happens for following sequence of commands:
      * colour = “red”
      * puppies = 36
      * colour + puppies

Colour is text labeled red and puppies is a number (36) which adds up to Red + 36

1. Complete “Lesson 5: Variables – String Operators” by typing the sample commands in the black area of the IDE.
   1. Explain why the following commands give different results:
      * Color + day \* fishes
      * ( Color + day ) \* fishes  
        This uses 3 variables to add and multiply the definitions of color day and fishes
2. Complete “Lesson 5: Variables – Indexes” by typing the sample commands in the black area of the IDE.
   1. What is the index of ‘r’ in “watermelon”?

4

* 1. Write an expression using mynumber to return ‘r’

myNumber = 4

print ("watermelon"[myNumber])

1. Integers (numbers) and Strings (letters) are different data types in Python?
   1. What doesn’t “friend” + 5 work?

The friend variable has to be put without it’s quotes in order to produce a non text answer

* 1. What is the difference between the ***int*** and ***str*** data types?

Int is used for numbers, while str are used for text

i have no friends :(