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 is putting letters, symbols, and characters together like words. A example is ”puppy dog"

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

Typing apple with the quotation marks work because then python can read it and without it then it is trying to find out what apple by itself means.

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

There is not a difference because when you click enter then it says the same thing every time.

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

Typing “apple’ gives an error because your putting 2 different actions into one sentence and trying to program it.

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

It does not equal 7 because with the quotation marks then it reads it and puts the result of the single quotation mark but without the quotation marks then it reads and puts the result which is 7.

**Lesson 4: Strings – Operators**

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

I think it works because you have apple written in the quotation marks and It reads that and knows what to do but because you have the + sign without quotation marks it does the action all together.

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

I think it gave me a error because you are asking it to subtract the letter might not be in the word so it doesn’t understand what to do.

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

It wrote Hello ten times. I think this works because you put what you want to write and then the number sign with the number made it happen.

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

It gave me a error and I think it did because of the same thing with subtracting and it doesn’t know if it is in the program.

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

Concatenation is like adding and you use it to put strings together and a example is “Hello” + “there!”

**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.

“sahil” \* 1

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

It does not print “l” because you typed in the program to put down the 4th part to the word which is “o” and not “l”.

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

(“Hay, Bob!”[4]) prints ‘B’. (“Hay, Bob!”[3]) prints ‘y’. (“Hay, Bob!”[5]) prints ‘o’.

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?

It is true and you just need to know this so you know what will type what.

**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?

When you put that in you get a error.

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

It does not work because when you put that in you get a name error and that kittens is not defined so that means that dividing does not work like how multiplying and adding works.

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”

When you put that in and click enter it puts in ‘red’ which is following the program you put in.

* + - puppies = 36

When you click enter it puts 36 which is the number of puppies you programmed.

* + - colour + puppies

You get a TypeError and it does not work.

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

You get ‘yellowMondayMondayMonday’ for this because you told it to do the color which is yellow plus the day which is Monday and to multiply that by the amount of fishes which is 3.

* + - ( Color + day ) \* fishes  
      There is not enough space on the line for that

1. 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”?

The index of ‘r’ in watermelon is [4]

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

fruit[mynumber+2]

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

It doesn’t work because you aren’t allowed to add a integer and a string together.

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

Int is a integer data types so it means that it is for numbers and str means string and that is for the words and numbers with quotation marks.