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 characters, like words or symbols. A string can also be words.**

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

**Putting it in quotes makes it a string but no quotes means it is a command.**

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 between the two.**

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

**Since they aren’t the same type of quote, the quotes don’t close.**

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

**Putting it in quotations makes it a string so it only registers are words, but without quotations it purely acts as a math equation.**

**Lesson 4: Strings – Operators**

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

**it makes the word apple. That is because the two words are put in a math equation so it adds.**

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

**It makes the word appl. That is because it acts as a math equation and subtracts.**

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

**It types hello 10 times.**

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

**It creates an error as you cannot divide hello 10 times.**

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

**Concatenation is like adding, it puts the two strings together.**

**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.

RAJDEEP

0123456

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

**It only print’s the 4th index**

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

**It prints the space, that’s the fourth index.**

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?

**True.**

**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?

**You get 12**

* 1. Why doesn’t typing kittens / 3 work?  
     **There is no variable assigned to kittens.**

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

**I get an error.**

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  
        **You get different results because of BEDMAS.**
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”?

**The index is 4**

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

**print(mynumber[4])**

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

**You can only concatenate str to str and int to int**

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

**The difference between int and str is that int is integer, or whole number and str is string, or a word/group of words**