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 words and symbols which are put together. An example of a string would be “burger".

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

Typing apple without quotations does not work because instead of python thinking it’s a string, it thinks it is an undefined variable. When typing apple with quotations, python identifies it as a string which is why it is not considered as an error.

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

No, there is no difference when typing apple with single and double quotations. They both do the same thing.

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

An error is given when this is inputted because there is no double quotation on the other end so Python cannot read it.

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

This does not work because the string is not a program to do the calculations but instead to print out the message. When there are no quotations, the program calculates it.

**Lesson 4: Strings – Operators**

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

It merges them together when you type this out. I think this works because it sees this as two separate tasks and merges them together.

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

It gives an error. I think this gives an error because it is a string which is not supported.

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

It gives an error. I think this gives an error because it is a string which is not supported.

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

This gives an error. I think this gives an error because it is a string which is not supported.

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

Someone would use this operator if they want to add words together. So if there were two words such as “big" and “apple”, they would be put 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.

H A R A N

0 1 2 3 4

Print(“Haran”[4])

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

Because the 5th letter is O.

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

This prints the space in between the “,” and “B”.

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. This only needs to be remembered.

**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?

An error is given if you type this in.

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

The / will not work because a word cannot be divided.

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

An error is given from this sequence of commands because both of the variables have to be defined as numbers and not words.

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

These following commands give different results because one of them has brackets. This alters the order of the commands results like bedmas.

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”?

4

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

myNumber=4

ruin(myNumber-3)

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

Strings and integers cannot be mixed making unable to work.

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

Int refers to whole numbers while str refers to a set of symbols and words.