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 a bunch of characters put together.

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

It does not work because the program cannot see any words that it has to print and it thinks that it is an undefined variable.

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

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

This gets an error code because there is no double end quotations so the program does not read the input as a message.

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

It does not work because the program is designed to print the message and not solve for it.

**Lesson 4: Strings – Operators**

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

I think this works because the program reads this input as two separate messages so it will merge them together and print them to complete its task.

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

This gives an error because “-” is a non-supported string.

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

This gives an error because “\*” is a non-supported string.

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

This gives an error because “/” is a non-supported string.

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

One uses this to add words side to side. One can use this by typing "Hi" + "there!". This puts the “Hi” and “there” 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.

print("Dinesh"[4]) D I N E S H

0 1 2 3 4 5

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

Because the 4th letter of the word is “o” and not “i”

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”

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. You only need to remember this.

**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 an error

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

This does not work because the “/” is unsupported as you cannot divide a word.

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

You get an error because you need to assign a number and a word to two variables

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

They give different results because of the brackets as they have to follow the bedmass format.

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”?
      1. 4
   2. Write an expression using mynumber to return ‘r’
      1. mynumber = 4
      2. fruit[mynumber-2]
2. Integers (numbers) and Strings (letters) are different data types in Python?
   1. What doesn’t “friend” + 5 work?
      1. Because you cannot mix strs (strings) ans ints (integers)
   2. What is the difference between the ***int*** and ***str*** data types?
      1. Int refers to whole numbers whereas str refers to words.