**SKELETAL NOTES** (follow this template to take notes as you are working through the lab):**:**

**Learning Objectives**

What are the main learning objectives for this lab?

**Functions**

List all the **Python commands (functions)** learned and their syntax:

* **String functions:**

* **Input:**
* **Other**

**Loops**Write down the general structure of a for loop (write both, one using range and one using a string or list)

**Unix**

List all the **bash commands** learned and their syntax:

**FOCUS QUESTIONS** (Make sure you can answer these questions when you are done with the lab):

* What is the difference between   
  print(“Hello “) and print(greeting) ?
* What is a variable?
* String functions are called with the . (dot) operator (e.g. mystring.count()). What other *complex object* have we looked at in this course that does the same?
* The input() function actually does both input and output. Explain.
* What happens if there is no assignment to the left of the input() function?   
  e.g.   
  input(“Please enter a message”)  
  instead of  
  message = input(“Please enter a message”)
* What does the range() function return?
* What is the role of start, stop and step in the range() function?
* How can we use range() to write a loop to count down (e.g. from 10 to 0)?
* What is the difference between these two loops?  
  1. for i in range(3):  
   print(i)  
    
  2. for i in [0, 1, 2]:  
   print(i)
* What is c in the following code segment?  
  for c in myString:  
   print(c)
* What is i in the following code segment?  
  for i in range(3):  
   print(i)
* What does the split() function return?
* What happens to the character the split()function *splits* on?
* What happens if the character the split()function *splits* on is found at the end of the string?
* What is the role of the square brackets ([]) in indexing (i.e. what does mystring[i] stand for?)
* What is the difference between print(“hi”+ “bye”) and print(“hi”, “bye”)? Write a program to print both ways and observe the difference. Also note that you can use + outside of a print statement, but not the comma (e.g. longmessage = message1+message2)
* You can take the length of a string using len(). What else can you take the length of?   
  Write a simple program to take the length of a list (e.g mylist = [1,2,3]).  
  If len() treats a string as a list, what is it a list of?