# CIS30C Unit 1 Assignment: Chapter 1

In this assignment, we will learn and/or review Python scripting concepts. Refer to Unit 1 notes and Chapter 1 in the textbook to complete the below exercises.

1. *What version of Python should be downloaded and installed for this course? Which version of Python is no longer supported.*

3.7.x or newer. 2.7 is no longer supported.

1. *Why is Python used in the cybersecurity field?*

* Many security tools are written in Python.
* It is a multi-platform and open-source programming language.
* It is simple, fast, robust, and powerful language.
* Many libraries, modules, and projects related to system security use Python.
* Abundant amount of documentation is available.
* Large user community.
* Can be used to create robust program with minimal code.
* Ideal for prototyping and rapid-concepts testing (Proof of Concept).

1. *Write a Python script to declare a variable and use it to display your full name. Provide screen capture of the script and output.*

Student\_name = “Sandra” #declaring a variable

print(Student\_name) #display content of variable

1. *Write a Python to declare a list of network devices and use common methods to accomplish the below tasks.*
2. *Add a device to the list.*
3. *Remove the first device from the list.*
4. *Add tuple seg1\_switch = (‘NETGEAR04’, ‘NETGEAR05’) to the list using extend()*
5. *Add tuple seg1\_switch = (‘NETGEAR04’, ‘NETGEAR05’) to the list using append()*

*Provide screen capture of the script and output.*

See Labs example U1Ex4.py in Github.

1. *Refer to [Python Documentation for Built-in List Methods](https://docs.python.org/3/tutorial/datastructures.html) and write a Python script to accomplish the following tasks.*
2. *Sort the list created in Exercise 4 including step 4C. \*Note: sort() cannot sort tuple. Display list.*
3. *Count the number of times ‘NETGEAR05’ appears in the list in Exercise 4. Display count value.*
4. *Return the index of ‘NETGEAR04’. Display index.*
5. *Display the last item in the list using list index.*
6. *Insert ‘Linksys12’ at the third index or 4th item in the list.*
7. *Display the reversed list.*
8. *Clear the list.*

Provide screen capture of the script and output.

See Github U1Ex5.py lab example.

1. Write a Python script using **range**() to search for a list of network protocols. Provide screen capture of the script and output.

See Github U1Ex6.py lab example.

1. Write a Python script for the following tasks:
2. Declare a **tuple** that contains a group protocols.
3. Display the content of the tuple.
4. Display the second item in the tuple.

See Github U1Ex7.py lab example.

1. Write a Python script for the following tasks:
2. Declare a dictionary of user account information, which consists of username, password, e-mail address, department.
3. Display the content of the dictionary.
4. Use update() to add job title/role to the dictionary.
5. Display the content of the dictionary after it has been updated.
6. Use len() to return and display the number of key values in the dictionary.
7. Use .keys() to return and display a list of all keys in the dictionary.
8. Use .items() to return the entire list of items in a dictionary
9. Use .items() and for-loop to display key and values in the dictionary. Note: This task cannot be the same as #8B.

Provide screen capture of the script and output.

See Github U1Ex8.py lab example.

1. Write a script to define a Python function and use arguments to display a list network server. Provide screen capture of the script and output.

See Github U1Ex9.py lab example.