Python Scripting for CS – Lab 1

Keyloggers

# Purpose

In this lab, you will have the opportunity to practice modifying an existing script and setting up a keylogger on your machine.

## Skills

The purpose of this assignment is to help you practice the following skills that are essential to your success:

## Create Python scripts

## Use Visual Studio Code

* Use Kali Linux
* Understand Python syntax

## Knowledge

This assignment will also help you become familiar with the following important content knowledge in this discipline:

* Utilize the basic syntax, data types, and control structures of Python
* Write scripts in a virtual environment

# Instructions

Follow the instructions laid out in this lab. Your lab activities will begin with Task 1. Tasks will build on each other and should not be done out of order.

Answer the critical thinking questions as best you can.

# Formatting

|  |  |  |
| --- | --- | --- |
| Formatting | Explanation | Example |
| Definitions | Definitions are defined in bold | **Word:** This is the definition |
| Employability Skills | Employability skills are defined in green and associated with critical thinking questions | **Think Critically and Creatively** |
| Commands | Commands are written in Consolas and highlighted in yellow. Commands that are case sensitive will have an underline underneath the capitalized letter. | get-service |
| File names/paths, programs, & buttons | File names, programs, and buttons are written in Consolas and highlighted in gray. | C:\Tools\processes.txt |
| <dynamic content> | Content in <> should be replaced with what is required, removing the <> as well | \\<servername>\Home |
| Examples | Examples will be in Consolas and highlighted in blue | **skywalker.local** |
| Recall & Apply | Tasks that connect to previous course work will ask you to recall and apply learning from previous Learning Modules or classes | **Recall & Apply Learning from Network Essentials** |

# Criteria for Success

This assignment is worth 20 points. You will be graded on the script you created as part of this lab.

# Lab Environment

In this class, you will be using VMs set up in Cloud.

# Log into Cloud

1. Access NWTC cloud at <https://lab.nwtc.edu>
2. Login using your username and password assigned in Lab 1
3. Start your Kali Linux VM

# Task 1: Download pythontemplate.py

1. On your Kali VM, navigate to <https://github.com/RachelGehrke/PythonCS>
2. Go to LM01
3. Download pythontemplate.py and save it to your pythoncs/vepython3 folder
4. Open pythontemplate.py in VS Code and save it as computerinfo.py
5. Open a terminal window
6. **Recall & Apply Learning from Lab 0** && **Think Critically and Creatively:** Activate your virtual environment
   1. This *must* be done prior to installing any packages or running our script
   2. If you need to, write your own step by step instructions here:

# Task 2: Create a Script

1. We are going to create a script that does the following:
   1. Gets the following information from the local computer:
      1. Computer name
      2. IP Address
      3. OS Name
      4. OS version
   2. Prints the above information with clear headings
2. **Recall & Apply Learning from LM1 Lecture**: Your script should do the following:
   1. Imports the following modules:
      1. platform
      2. os
      3. socket
   2. Uses variables where appropriate
   3. Comments are clear and descriptive
3. Use Google! I’ve given you the modules that will help you the most, but the rest is up to you…

Example output:

Computer Name

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Sywalker-Kali1

IP Address

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10.240.80.13

OS Name

-------------------

Kali

OS Version

-------------------

2023.1

1. You will turn in your .py file to the dropbox in Canvas for up to 20 points

# Task 3: Extra Credit (5pts)

1. For up to 5 additional points, modify your script to print this information to a file.
2. Turn in both your .py script and the .txt file of your report