\*ensure you have read course policies in D2L shell

Required python aspects for this project

* Pseudocode
* Submission of code in D2L (pseudocode is in a block comment at the beginning of the code)
* A **10-minute** video of you running your script in your environment, your video must have you verbally describing your code and what is happening at execution. 10 minutes is a firm stop point. Anything past that will not be watched.
* Do not submit a link to YouTube or other public video sharing service you have created for your submission. Your submissions needs to be handed in through D2L. Failure to do this will result in a

0%

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* In your video, specifically point out in your code the required python requirements listed below.

o Functions o Modules o Variables

* + Constants
  + Variety of data types o Lists o Loops o File handling o User input o Error handling

Scenario:

Your boss has just acquired a new client that needs a security audit done on all their desktop machines. They don’t want a script to run on the server. They want someone to manually go to each desktop and assess the security on it.

They have 50 Linux desktops. Too log in, access system files, take notes, takes about 5 minutes for an experienced technician. For this technician doing this process you are looking at about 4 hours. For a new technician you are looking at least double that, close to 7 hours.

Your boss wants you to:

-Write a single script that retrieves the following

* Machine name
* List of all users and the group they are associated with
* From **/proc/cpuinfo** get the following o Processor o Vendor\_id o Model o Model name o Cache
* All services on machine and their current status
* This data needs to be collected and formatted in a text file for easy readability.

**Rubric Python Element:**

1. = Not Present, Skill not demonstrated.
2. = Basic knowledge of python element was demonstrated, but more detail could have been applied to the code to show that the student fully has a grasp of the concept.
3. = Student has a very good concept of python element and they demonstrated the element in a way that was **creative** and shows advanced knowledge of the required python element. Python Element

|  |  |  |  |
| --- | --- | --- | --- |
|  | Grade Achieved | | |
|  | 0 | 1 | 2 |
| Functions |  |  |  |
| Modules |  |  |  |
| Variables:Constants |  |  |  |
| Variables: Data types |  |  |  |
| Lists |  |  |  |
| Loops |  |  |  |
| Error Handling |  |  |  |
| TOTAL | 14 | | |

Content

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Grade Achieved | | | |
|  | 0 | 1 | 2 | 3 |
| Machine name | Not done | Attempted but code was incomplete, confusing to follow, explanation was not strong. Commenting was absent. | Completed the required section of code. Incomplete or lack of depth of explanation in video. Commenting was present but needed more depth | Task is completed. Code is simple to follow. Explanation of section in video demonstrates strong knowledge of task. |
| List of all users and the group they are associated with | Not done | Attempted but code was incomplete, confusing to follow, explanation was not strong. Commenting was absent. | Completed the required section of code. Incomplete or lack of depth of explanation in video. Commenting was present but needed more depth | Task is completed. Code is simple to follow. Explanation of section in video demonstrates strong knowledge of task. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| From  **/proc/cpuinfo** get the following  Processor  Vendor\_id  Model  Model name  Cache | Not done | Attempted but code was incomplete, confusing to follow, explanation was not strong. Commenting was absent.    **Missing any one of these 5 will automatically get you a**  **“1”. Missing**  **2 or more will get you a “0”** | Completed the required section of code. Incomplete or lack of depth of explanation in video. Commenting was present but needed more depth | Task is completed. Code is simple to follow. Explanation of section in video demonstrates strong knowledge of task. |
| All services on machine and their current status | Not done | Attempted but code was incomplete, confusing to follow, explanation was not strong. Commenting was absent. | Completed the required section of code. Incomplete or lack of depth of explanation in video. Commenting was present but needed more depth | Task is completed. Code is simple to follow. Explanation of section in video demonstrates strong knowledge of task. |
| Readability of formatted output file | Not done | Attempted but code was incomplete, confusing to follow, explanation was not strong. Commenting was absent. | Completed the required section of code. Incomplete or lack of depth of explanation in video. Commenting was present but needed more depth | Task is completed. Code is simple to follow. Explanation of section in video demonstrates strong knowledge of task. |
| Total |  |  |  | 15 |

Presentation

|  |  |  |  |
| --- | --- | --- | --- |
|  | Grade Received | | |
|  | 0 | 1 | 2 |
| Code:Pseudocode | Not done | Present but requires more thoughtful creation. The logic behind the pseudocode is not clear | Presentation was very clear. Simple to follow the logic. |
| Video | Video was very hard to follow. | Explanations with video are disjointed. The flow of how items are explained required the watcher to go back and rewatch | Presentation was very clear. Easily able to understand everything that was demonstrated |
| Total |  |  | 4 |

\*Your instructors have seen so much code in their careers that at this point it is extremely easy to determine when someone is cheating. Do yourself a favour and don’t cheat. 15% would be a tremendous hit to your final grade

|  |  |
| --- | --- |
| Python Element | 14 |
| Content | 15 |
| Presentation | 4 |
| Total | 33 |