Advanced Scripting   
Final Exam

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Document Prepared for: CIT361 Student

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# Instructions

The final exam has a couple components the first part is to write a script that demonstrates your understanding of PowerShell by completing the required tasks. You will need to describe the function of your script to your instructor as part of the final. The second part is a self-assessment component. The final is open book open note, no time limit.

# Final Tasks

1. Write a script to complete the following tasks. Name the script <lastname>\_<firstname>-Final.ps1. Output the answer to each of the questions below. The files are from the psfiles.zip you downloaded earlier. This script is to be done on you own with no help from anyone else.
   1. Read the gems.xml file from the current directory
   2. How many bytes are in the file you downloaded? 19579
   3. What is the MD5 hash of the file? 9831D226EBB6ED51C980D2D669EE60E3DFCDB9C1127AC03E3891FD62D55606CB
   4. How many gems are in the file? 68
   5. What is the average hardness of all the gems? 5.97352941176471
   6. Create a csv file that contains all the gems whose hardness is greater than 7 named <lastname>\_<firstname>-hardgems.csv
   7. Read the file doi.txt from the current directory
   8. How many words are in the document? 1501
   9. How many unique words are in the document? 695
   10. Create a file named <lasname>\_<firstname>-words.txt that contains a list of unique words sorted in alphabetical order. Save it in the current directory.
2. Rate your PowerShell abilities (check one)

* **Proficient:** Throw a task at me and I can solve it with minimal research time, I am comfortable with PowerShell syntax and basic manipulation cmdlets. I am comfortable with using PowerShell interactively and as a programming language. Why would I need google?
* **Competent:** given a task, I can solve it with sufficient time and research. I can do basic PoweShell stuff but need to spend significant time working out syntax and cmdlets.
* **Needs improvement:** I will need to spend a lot of time trying to figure out how to solve the problem. I need to research basic cmdlets and programming structures to solve problems. I am frequently tempted to google for solutions.  
  Proficient

1. Self-Assessment: What letter grade have you earned (not want) in this course:  
   B+   
   Justify, describe in detail why you feel you have earned the grade. Consider, things such as effort, did you read the book chapters, did you practice PowerShell outside of direct assignments, did you attend class etc.  
   Justification:  
   I have started to use powershell outside of class and have been thinking of integrating it in my homelab. I have been looking for ways to better automate my VM deployment and this is one of the ways that can help me. Aside from the automation provided by WDS/MDT. My tutorial on winget helped me understand that there’s more to powershell than just scripts but it's a powerful terminal as well. This class helped me see and appreciate powershell enough that Windows Terminal sits on my taskbar now.
2. Describe your script. Do one of the following:
   1. **IF YOU ARE REGISTERED FOR AN ONLINE CLASS**: Create a video that walks your instructor through your script, and your self-assessment. Store the video in an online provider like your BYU-I OneDrive account and share with your instructor.
      1. Enter the video link here: https://youtu.be/xTd-hSwsdCU
   2. **IF YOU ARE REGISTERED FOR A CAMPUS CLASS:** Schedule a meeting with your instructor to walk him/her through your script and assessment. Your instructor will provide a link to a scheduling tool.

## Deliverable:

Upload this document, your script, hardgems and words files to I-Learn.