CYSE 695 – Linux for Cybersecurity

Module 2 | Linux Basic Commands

Total: 100 Points

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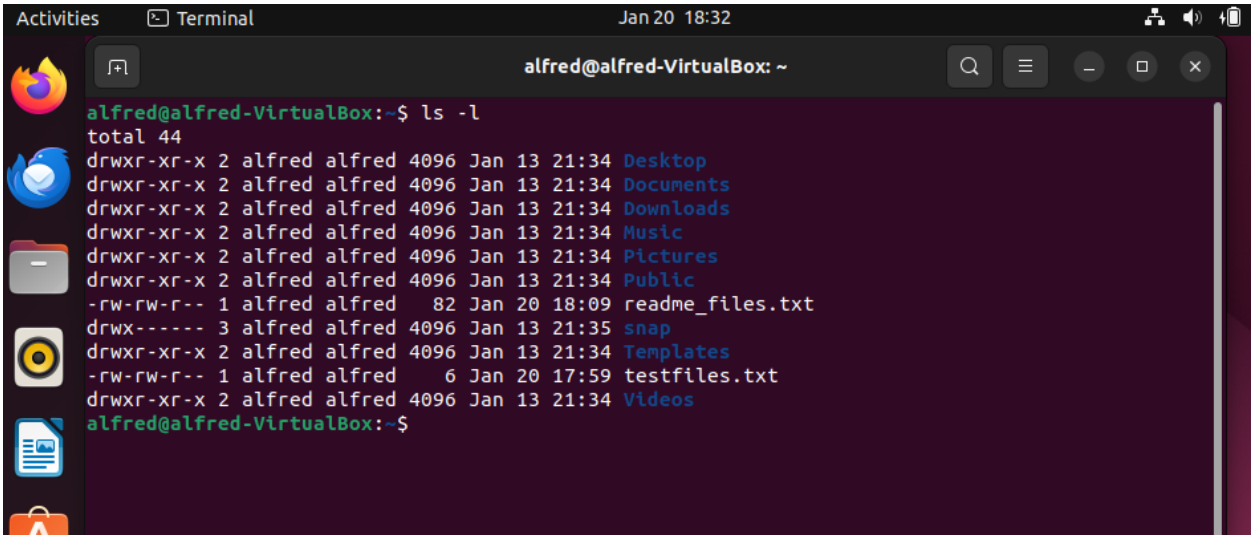
Directions: Practice the following tasks in Linux VM – Ubuntu using various Linux commands for file management. Insert screenshots where applicable. Upload completed document in Canvas.

Task 1: ls command

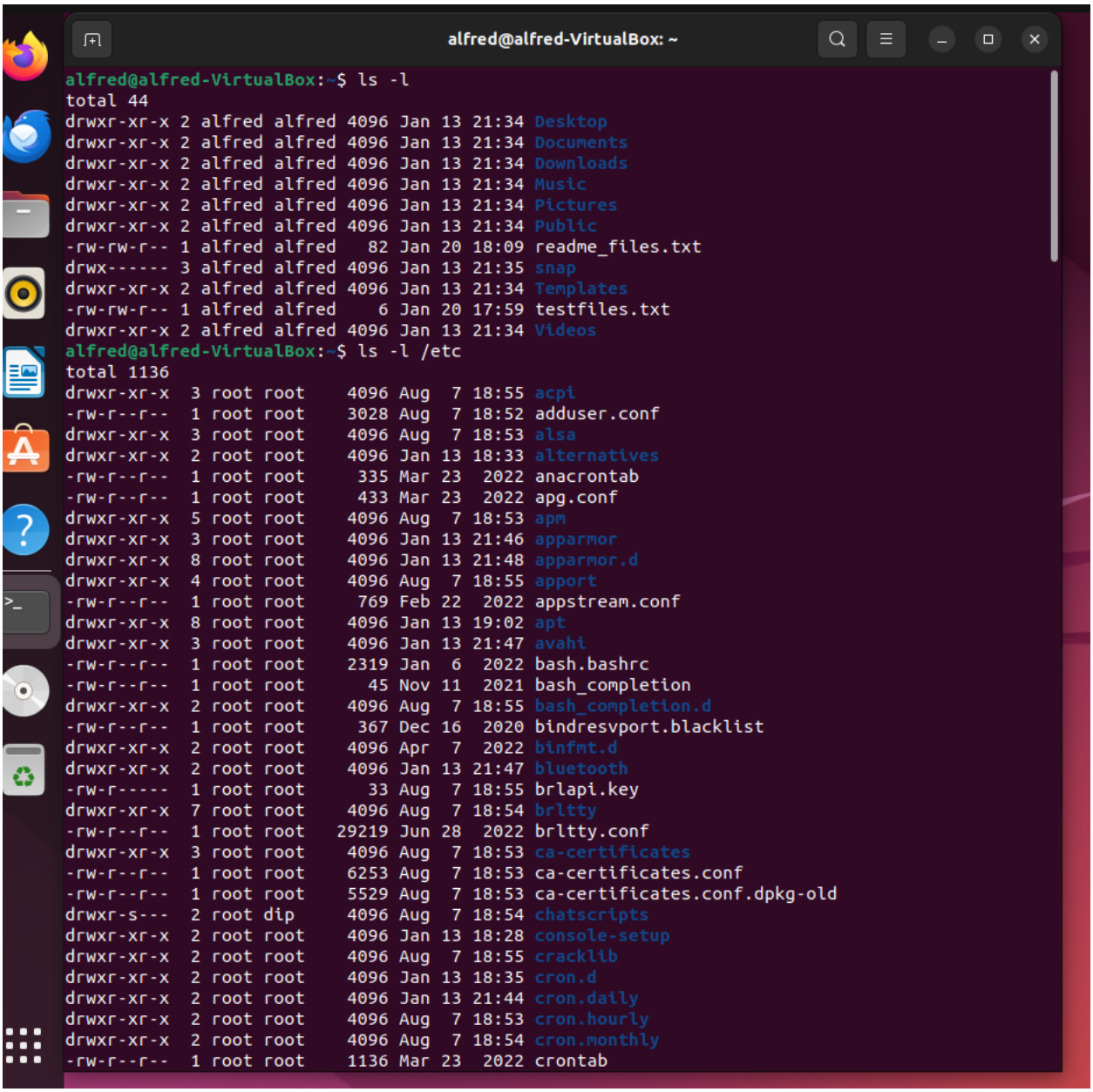
- Use ls -l to display detailed information about the files in your home directory. Upload the screenshot for this step after executing the command.

  [Add screenshot here]



- Use ls -l to display detailed information about the files in /etc directory. Upload the screenshot for this step after executing the command.

  [Add screenshot here]



- What are the security implications of using the ls command? How can it be configured to display only specific file attributes? Type your answer in **3 to 5** sentences here.

  Response:

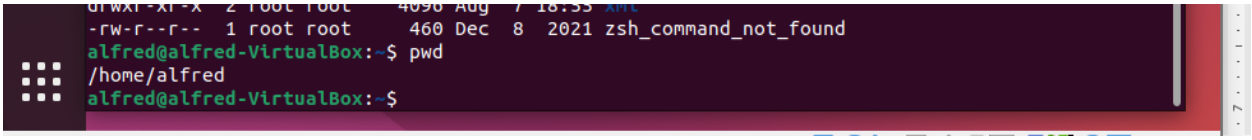
  The exposure of sensitive files or directories might be a security issue if they are visible to unauthorized users or stored in unsafe locations. For example, a malicious individual may utilize the information from the ls command to learn about the organization of directories, patterns used for file names, or possible configuration files.

To selectively show particular file properties, you may integrate the "ls" tool with other commands and arguments. As an example: Using the command "ls -l" to exhibit comprehensive data, after that redirect the output to either "awk" or "cut" to extract particular columns.

Task 2: pwd command

- Use pwd command to confirm your new working directory. Upload the screenshot for this step after executing the command.

  [Add screenshot here]



- What are the potential security vulnerabilities associated with the pwd command and how can they be mitigated? Type your answer in **3 to 5** sentences here.
  - Logging or displaying the output of the pwd command in an unsecured context, such as a shared terminal session or a web application, may expose directory hierarchies, system architecture, or the presence of sensitive directories to unauthorized users.
  - Exercise caution with the location where the output of the pwd command is displayed or recorded. Refrain from utilizing it unduly in scripts or command outputs that unauthorized persons might potentially access.

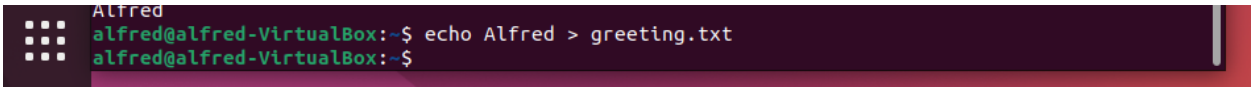
Task 3: echo command

- Use the echo command to display a greeting message with your username. Take the screenshot for this step after executing the command.

  [Add screenshot here]

- Redirect the output of the echo command to a new file named "greeting.txt" in your home directory. Take the screenshot for this step after executing the command.

  [Add screenshot here]



Task 4: cd command

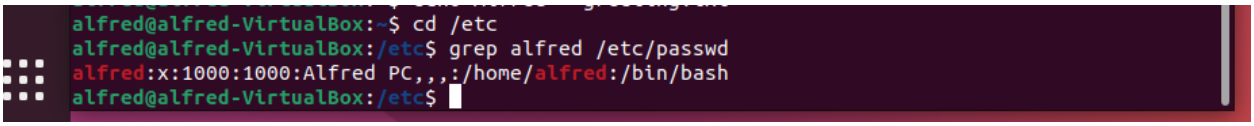
- Use cd command to change the directory to /etc. Take the screenshot for this step after executing the command.

  [Add screenshot here]

Task 5: Pattern searching using **grep** command

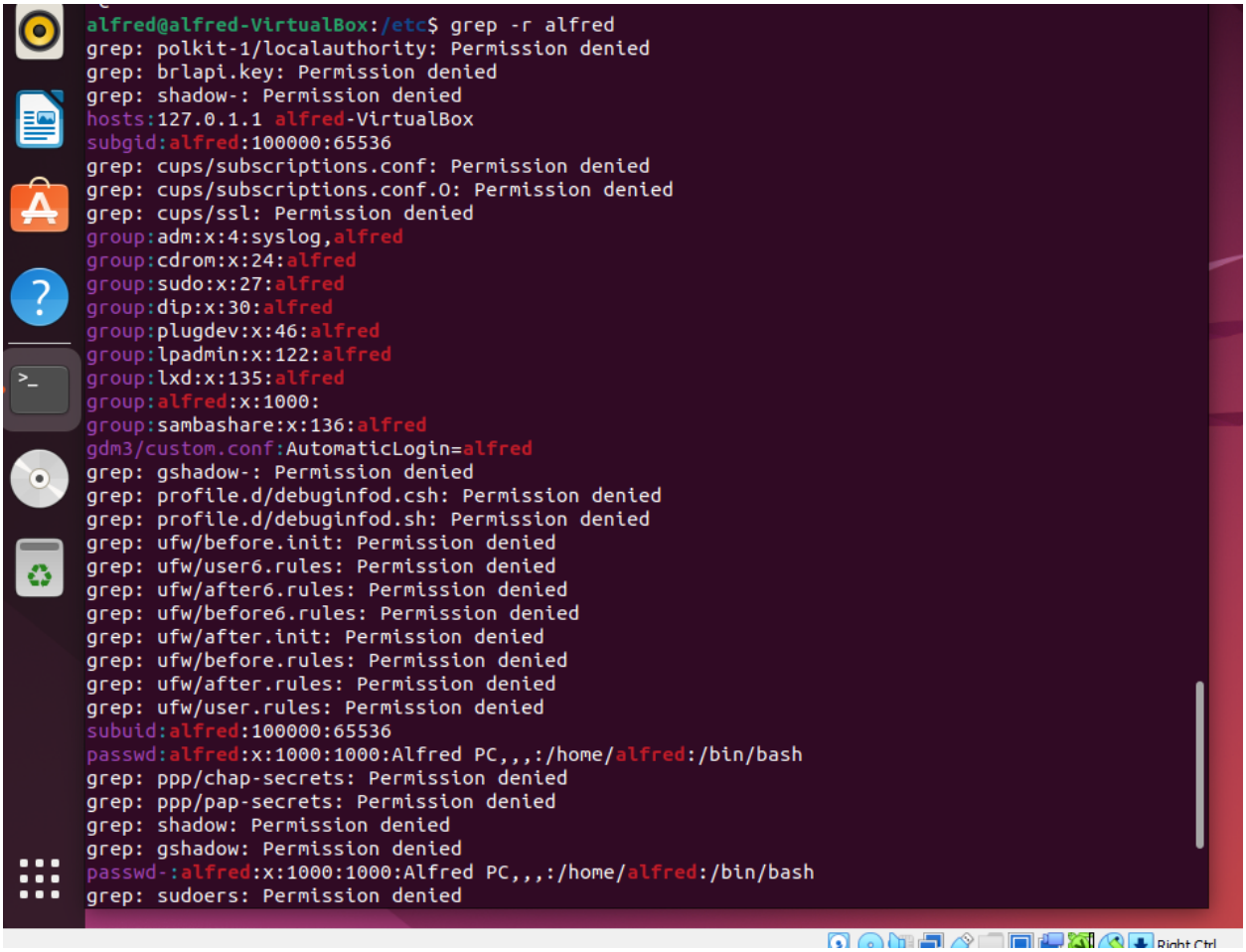
- Use the grep command to search for your username within the contents of the "/etc/passwd" file.

  [Add screenshot here]



- Display the lines containing "your username." Take the screenshot for this step after executing the command.

  [Add screenshot here]



Grading Criteria

Task 1: ls command **[3 subtasks x 10 = 30 Points]**

Task 2: pwd command **[2 subtasks x 10 = 20 Points]**

Task 3: echo command **[2 subtasks x 10 = 20 Points]**

Task 4: cd command **[1 subtask = 10 Points]**

Task 5: Pattern searching using grep command **[2 subtasks x 10 = 20 Points]**