



Welcome to this session: Task 14 Walkthrough

The session will start shortly...

Questions? Drop them in the chat.
We'll have dedicated moderators
answering questions.



Cyber Security Session Housekeeping

- The use of disrespectful language is prohibited in the questions, this is a supportive, learning environment for all - please engage accordingly. **(Fundamental British Values: Mutual Respect and Tolerance)**
- No question is daft or silly - **ask them!**
- There are **Q&A sessions** midway and at the end of the session, should you wish to ask any follow-up questions. Moderators are going to be answering questions as the session progresses as well.
- If you have any questions outside of this lecture, or that are not answered during this lecture, please do submit these for upcoming Academic Sessions. You can submit these questions here: **Questions**

Cyber Security Session Housekeeping

- For all **non-academic questions**, please submit a query:
www.hyperiondev.com/support
- **Report a safeguarding incident:** **www.hyperiondev.com/safeguardreporting**
- We would love your feedback on lectures: Feedback on Lectures
- If you are hearing impaired, please kindly use your computer's function through Google Chrome to enable captions.

Safeguarding & Welfare

We are committed to all our students and staff feeling safe and happy; we want to make sure there is always someone you can turn to if you are worried about anything.

If you are feeling upset or unsafe, are worried about a friend, student or family member, or you feel like something isn't right, speak to our safeguarding team:



Ian Wyles
Designated Safeguarding
Lead



Simone Botes



Rafiq Manan



Charlotte Witcher



Nurhaan Snyman



Ronald Munodawafa



Tevin Pitts

Scan to report a
safeguarding concern



or email the Designated
Safeguarding Lead:
Ian Wyles

safeguarding@hyperiondev.com

Stay Safe Series:

Mastering Online Safety One week at a Time

While the digital world can be a wonderful place to make education and learning accessible to all, it is unfortunately also a space where harmful threats like online radicalization, extremist propaganda, phishing scams, online blackmail and hackers can flourish.

As a component of this BootCamp the ***Stay Safe Series*** will guide you through essential measures in order to protect yourself & your community from online dangers, whether they target your privacy, personal information or even attempt to manipulate your beliefs.

Trustworthy Websites: How to Spot Secure Sites

- Look for the padlock.
- Check if there is a valid SSL/TLS certificate.
- Look for a site seal.
- Check if the URL is legitimate.
- Pop-up and Redirection ads are a red flag.



Learning Objectives & Outcomes

- Recall the purpose and basic syntax of common Linux commands, such as `chmod`, `apt`, and pipeline commands.
- Describe the purpose of each permission level (read, write, and execute) and interpret the effects of using `chmod` with symbolic or numeric modes.
- Implement the `chmod` command in a script to set permissions for files and folders accurately.

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Overview of Session

- Discuss more command line utilities and what they are used for.
- Define Bash and create shell scripts to assist in system maintenance.

Key Terms

- **sudo(Superuser Do):** Is a command in Unix/Linux that allows a user to execute commands with elevated privileges (administrator or "root" level). It temporarily grants superuser access for tasks that require higher permissions, such as installing software, modifying system files, or changing system settings.
- **chmod(Change Mode):** The chmod command is used in Unix/Linux systems to change the file permissions for a file or directory. Permissions can be altered for the owner, group, and others categories.
- **File Permissions:** File permissions in Linux determine who can read, write, or execute a file or directory. Each file has three permission levels:

Task at hand

Auto-graded task

In this task, you'll be creating two different scripts.

- Write a Bash script called **change_permissions.sh** that changes the permissions of all the objects in a folder to `-rw-r--r--`.
- Linux users must become adept at finding and learning how to use new commands by using [man pages](#) and other resources. Review the man page for the **apt** command. Support your understanding with research via web search if necessary. Then, write a Bash script called **manage_apt.sh** that does the following with **apt**:
 - Uninstalls all unused dependencies.
 - Updates the software database.
 - Updates the entire system.

Note: For the second script, you may need to check which account is running the command and have your script notify the user accordingly to avoid any permission errors.

Be sure to place files for submission inside your task folder and click "Request review" on your dashboard.

File Ownership(UGO)

User

The file's owner is a user. A file's creator automatically becomes its owner. Consequently, a user may also be referred to as an owner.

Group

Multiple users may be included in a user group. All members of a group will have the same access privileges to the file under Linux. Consider a project where several people need access to a file. You could add all users to a group and give the group read/write access to all files instead of giving each user their own individual permissions. This would prevent anyone outside of the group from reading or changing the files.

Other

Simply anyone else who is authorized to access a file. This User has not created the file nor does it belong to a user group that could be the owner of the file. In actuality, it refers to everyone else. As a result, setting permissions for the world also refers to setting permissions for others.

Octal Representation	String Representation	Permission Type
0	---	No permission
1	--x	Execute only
2	-w-	Write only
3	-wx	Write & Execute
4	r--	Read only
5	r-x	Read & Execute
6	rw-	Read & Write
7	rwX	All (Read, Write & Execute)


```
drwxr-xr-x. 1 supervillain supervillain  22 Jun  5 18:53 folder
-rw-r--r--. 1 supervillain supervillain 8669 Jun  5 20:48 forecast.txt
```

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Questions and Answers



Thank you for attending



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