🛠️ \*\*Bash Script – project\_initializer.sh\*\*

This Bash script automates the setup of a working environment for a technical team. It demonstrates my ability to organize a project structure, manage system users and groups, apply security permissions, and produce a packaged environment ready for deployment or archiving.

 \*\*Detailed Steps of the Script\*\*

1. 👋 \*\*Welcome Message\*\*

```bash

echo "Welcome $(whoami)!"

echo "$(date)"

Displays the name of the user running the script along with the date and time. This logs the execution for auditing.

1. 📁 **Creating Project Structure**

mkdir -p projects/users\_team

cd projects

mkdir admin\_team security\_team

Creates the main projects directory with three subdirectories for teams: users\_team, admin\_team, and security\_team.

1. 👥 **Adding Members to the "users" Team**

cd users\_team

mkdir Gabens Don Danirode Lyncold

Creates subdirectories representing user folders within the team.

1. 🔙 **Returning to the Root Directory**

cd ../..

Returns to the top-level directory to continue system operations.

1. 👤 **Creating a System User and Group**

sudo useradd -m apm

sudo groupadd admin\_team

sudo usermod -aG admin\_team apm

sudo chgrp admin\_team projects/admin\_team

sudo passwd apm

Creates a user apm and a group admin\_team. The user is added to the admin\_team group, and the group is assigned to the admin\_team folder. The password for apm is set for real use.

1. 🧾 **Generating and Assigning a History File**

touch projects/users\_team/history\_command

history > projects/users\_team/history\_command

sudo chown apm projects/users\_team/history\_command

Logs the command history to a file history\_command, assigns ownership to apm, simulating a traceability or audit system.

1. 🔐 **Restricting Access**

sudo chmod o-r projects/admin\_team projects/security\_team

Revokes read permissions for other users on the sensitive admin\_team and security\_team directories, simulating access control by role.

1. 📦 **Archiving the Environment**

tar -czvf projects.tar.gz projects

Compresses the entire projects environment into a .tar.gz archive — useful for deliverables, backup, or deployment.

♻️ **Cleanup Environment – remove\_project\_initializer.sh**

A second script is provided to clean up everything created by the main script:

#!/bin/bash

sudo userdel apm

sudo groupdel admin\_team

sudo rm -rf /home/apm projects projects.tar.gz

This script will:

* Delete the apm user
* Delete the admin\_team group
* Remove all files and directories related to the project

💡 **This script is useful for:**

* Repeated testing
* Temporary environments
* Demonstrations

✅ **Final Results**

* A complete team-based environment (with users, permissions, and structure)
* A functional and secure system user
* An associated history file
* A .tar.gz archive of the project
* A professional cleanup script

**Skills demonstrated:**

* ✅ Linux system administration (users, groups, permissions)
* ✅ Automation via Bash scripting
* ✅ Security and access management
* ✅ Archiving and preparing deliverables
* ✅ Creating and cleaning up a reproducible environment