

Robotics Corner Shell Project

Project 1 *Linux User Management*

Project Overview

This project involves creating a Bash script for managing user accounts on a Linux system. The script will allow system administrators to perform essential user management tasks through an interactive menu. The functionalities include adding new users, deleting existing users, listing system users, resetting passwords, and checking if a user exists.

Features to Implement

- Add a new user → Create a user account, set a home directory, and assign a password.
- Delete a user → Remove an existing user and optionally delete their home directory.
- List all system users → Retrieve and display a list of all registered users.
- Reset a user's password → Allow administrators to change a user's password.
- Check if a user exists → Verify whether a user exists in the system.
- Interactive menu → Provide a user-friendly interface for selecting actions.

Steps to Build the Script

- Ensure the script runs with administrative privileges (sudo).
- Create functions for each feature to handle user operations.
- Use a menu-driven approach to allow users to select options.
- Implement input validation to handle incorrect user input gracefully.
- Use system commands to perform actual user management tasks.

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Commands You CAN Use

Command	Description
<code>useradd</code>	Creates a new user.
<code>passwd</code>	Assigns or changes a user's password.
<code>deluser</code>	Deletes a user account.
<code>cut</code>	Extracts specific fields from a file (used for listing users).
<code>id</code>	Checks if a user exists by retrieving their user ID.
<code>column</code>	Formats command output into neat columns.
<code>read</code>	Captures user input in the script.
<code>if / case</code>	Implements conditional logic and menu-driven interaction.

Expected Outcome

After completing this project, you will have a fully functional user management tool that automates essential administrative tasks on a Linux system. You will also gain hands-on experience with Bash scripting, user account management, and Linux commands.