

# **RedHat System Administration**



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**Bash Script Project**

**Supervised by.**

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# Overview

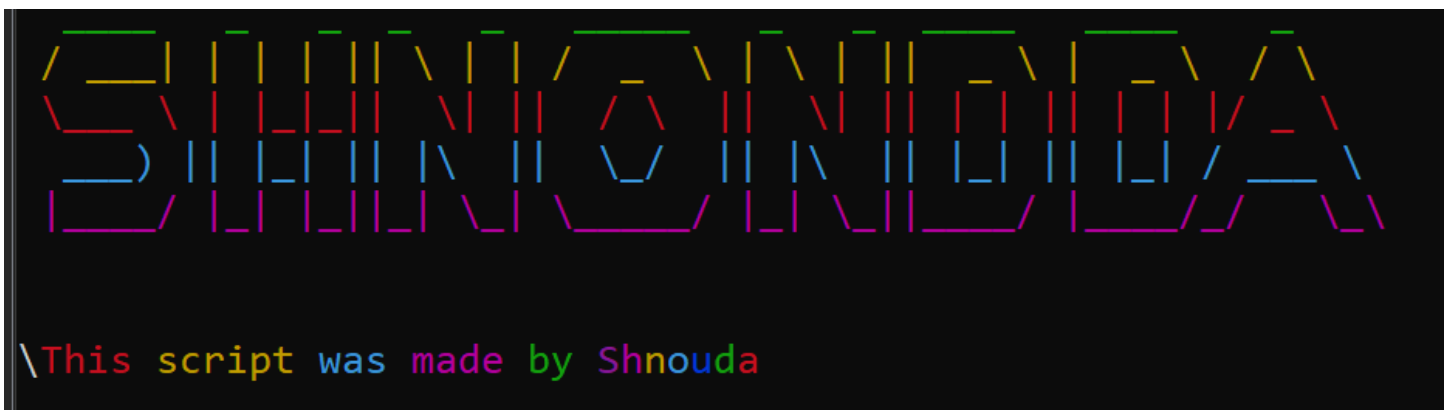
This collection of Bash utilities (or a single multi-mode script with subcommands) automates common Linux user & group admin tasks:

- user add / del / mod / list
- group add / del / mod / list
- change password (securely or interactive)
- lock / unlock account (disable/enable login)

They wrap standard system tools (useradd, userdel, usermod, passwd, chpasswd, groupadd, groupdel, groupmod, getent, passwd -l/-u) and add validation, logging, and safe behavior.

## What each operation does (short)

- **Add user:** creates account, optional home dir, shell, initial groups, expiration, UID. Uses useradd (and passwd or chpasswd to set password).
- **Delete user:** removes account; optionally remove home and mail spool (userdel -r).
- **Modify user:** change shell, home, primary/secondary groups, expiry, UID/GID, etc. Uses usermod.
- **List users:** list system users (via /etc/passwd or getent passwd) and filter by UID range if needed.
- **Add group:** create a group (groupadd).
- **Delete group:** remove group (groupdel) — ensure no critical members remain.
- **Modify group:** rename or change GID (groupmod).
- **List groups:** show groups (getent group).
- **Change password:** interactive passwd username (recommended) or programmatic chpasswd (careful — plaintext).
- **Lock/Unlock:** passwd -l username locks (prefixes ! in /etc/shadow), passwd -u username unlocks. usermod -L/-U do similar.



# 1- code for main project.

```
GNU nano 8.1 project Modified
PS3="shnouda> "
#===== code =====

echo -e "${WHITE}"
select var in "Add User" "Modify User" "Delete User" "List Users" "Add Group" "Modify Group" "Delete Group" "List Groups" "Disable User"
do
    echo -e "\n"
    case $var in
        "Add User")
            echo -e "${YELLOW}this script for add user"
            ./scripts/useradd
            ;;
        "Modify User")
            echo -e "${YELLOW}this script for Modify User"
            ./scripts/usermod
            ;;
        "Delete User")
            echo -e "${GREEN}this script for Delete User"
            ./scripts/deluser
            ;;
```

```
GNU nano 8.1 project Modified
"List Users")
    echo -e "${PURPLE}this script for List Users"
    ./scripts/listusers
    ;;
"Add Group")
    echo -e "${FUCHSIA}this script for Add Group"
    ./scripts/groupadd
    ;;
"Modify Group")
    echo -e "${BLUE}this script for Modify Group"
    ./scripts/groupmod
    ;;
"Delete Group")
    echo -e "${CYAN}this script for Delete Group"
    ./scripts/groupdel
    ;;
"List Groups")
    echo -e "${GREEN}this script for List Groups"

^G Help      ^O Write Out  ^F Where Is   ^K Cut        ^T Execute    ^C Location   M-U Undo      M-A Set Mark
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify    ^/_ Go To Line  M-E Redo      M-G Copy
```

```
shnouda@sh-nabil710:~ - nano project
GNU nano 8.1 project Modified

"List Groups")
    echo -e "${GREEN}this script for List Groups"

    ./scripts/listgroups
;;
"Disable User")
    echo -e "${YELLOW}this script for Disable User"

    ./scripts/unlockacc
;;
"Enable User")
    echo -e "${PURPLE}this script for Enable User"

    ./scripts/lockacc
;;
"Change Password")
    echo -e "${BLUE}this script for Change Password"

    ./scripts/changpass
;;
"About")

    echo -e "${YELLOW}"
    ./scripts/about
;;
"Exit")
    echo "Exiting...!"
    break
;;
*)
    echo "Invalid option, try again."
    ;;
esac
done
```

## Project Preview

```
shnouda@sh-nabil710:~$
shnouda@sh-nabil710:~$ ./project
You must use Root Prifilage to run this Script (use sudo)
shnouda@sh-nabil710:~$ sudo ./project
[sudo] password for shnouda:

SHNOUDA

\This script was made by Shnouda

1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit
2) Modify User       5) Add Group         8) List Groups       11) Change Password
3) Delete User       6) Modify Group      9) Disable User      12) About
shnouda>
```

## 1- User add

```
shnouda> 1
```

```
this script for add user
```

```
Please Enter the name of user that you need to add: shnouda
```

```
User 'shnouda' already exists. Try another one.
```

```
Please Enter the name of user that you need to add: sameh
```

```
User 'sameh' created successfully.
```

```
shnouda>
```

```
shnouda@sh-nabil710:~$ grep "sameh" /etc/passwd
```

```
sameh:x:1003:1004::/home/sameh:/bin/bash
```

```
shnouda@sh-nabil710:~$
```

## 2- User mod

```
this script for Modify User
```

```
1) Change login name      3) Change login shell      5) Set account expiry      7) exit
```

```
2) Change home directory  4) Change primary group  6) Change user ID (UID)
```

```
usermod:>1
```

```
Please Enter the username that you need to modify his Account: sameh
```

```
please enter the new name: sam
```

```
username changed from 'sameh' to 'sam'.
```

```
usermod:>2
```

```
Please Enter the username that you need to modify his Account: sam
```

```
please enter the new home path like /home/username: /home/shnouda
```

```
Home Dir changed from '/home/sam' to '/home/shnouda'.
```

```
usermod:>3
```

```
Please Enter the username that you need to modify his Account: sam
```

```
please enter the new shell like /bin/ksh or /sbin/nologin or /bin/bash: /sbin/nologin
```

```
The Shell changed from '/bin/bash' to '/sbin/nologin'.
```

```
usermod:>4
```

```
Please Enter the username that you need to modify his Account: sam
```

```
please enter the new group name: shnouda
```

```
./scripts/usermod: line 61: -g: command not found
```

```
Primary Group changed to 'shnouda'.
```

```
usermod:>6
```

```
Please Enter the username that you need to modify his Account: sam
```

```
please enter the new ID for user: 1020
```

```
user ID is Updated successfully to '1020'...!
```

```
usermod:>7
```

```
Exiting Successfully..!
```

```
./project: line 66: \033[0m: command not found
```

```
shnouda>
```

### 3- delete user

```
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit
2) Modify User       5) Add Group         8) List Groups       11) Change Password
3) Delete User       6) Modify Group      9) Disable User      12) About
shnouda> 3
```

this script for Delete User

```
Please Enter the name of user that you need to delete: sam
Are you sure you want to delete user 'sam' (yes,no): n
User deletion cancelled..!
shnouda> 3
```

this script for Delete User

```
Please Enter the name of user that you need to delete: sam
Are you sure you want to delete user 'sam' (yes,no): yes
User 'sam' Deleted successfully.
shnouda>
```

### 4- List users

```
shnouda>
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit
2) Modify User       5) Add Group         8) List Groups       11) Change Password
3) Delete User       6) Modify Group      9) Disable User      12) About
shnouda> 4
```

this script for List Users

```
nobody ----> (UID: 65534)
shnouda ----> (UID: 1001)
hoda ----> (UID: 1002)
shnouda>
```

### 5- Group add

```
shnouda@sh-nabil710:~
shnouda>
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit
2) Modify User       5) Add Group         8) List Groups       11) Change Password
3) Delete User       6) Modify Group      9) Disable User      12) About
shnouda> 5
```

this script for Add Group

```
Please Enter the group name that you need to add: soso
Group 'soso' created successfully.
shnouda>
```

## 6- Group Mod

```
shnouda@sh-nabil710:~  
shnouda>  
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit  
2) Modify User       5) Add Group         8) List Groups       11) Change Password  
3) Delete User       6) Modify Group      9) Disable User      12) About  
shnouda> 6  
  
this script for Modify Group  
1) Change group name  
2) Change GID  
3) Exit  
#? 1  
Please enter the group name you want to modify: soso  
Please enter the new group name: sasa  
Group name changed successfully from soso to sasa.  
#? 2  
Please enter the group name you want to modify: sasa  
Please enter the new GID: 1010  
GID for group sasa updated to 1010 successfully.  
#? 3  
Exiting Successfully..!  
./project: line 86: \033[0m: command not found  
shnouda>
```

## 7- Delete Group

```
shnouda@sh-nabil710:~  
shnouda>  
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit  
2) Modify User       5) Add Group         8) List Groups       11) Change Password  
3) Delete User       6) Modify Group      9) Disable User      12) About  
shnouda> 7  
  
this script for Delete Group  
Please Enter the group name that you need to delete it: soso  
Group 'soso' Dosen't Exist...  
Please Enter the group name that you need to delete it: sasa  
Are you sure to delete this group ( yes,no ): n  
User deletion cancelled..  
shnouda> 7  
  
this script for Delete Group  
Please Enter the group name that you need to delete it: sas  
Group 'sas' Dosen't Exist...  
Please Enter the group name that you need to delete it: sasa  
Are you sure to delete this group ( yes,no ): yes  
Group 'sasa' is Deleted Successfully..!  
shnouda>
```

## 8- List groups

Select shnouda@sh-nabil710:~

```
shnouda>
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit
2) Modify User       5) Add Group          8) List Groups        11) Change Password
3) Delete User        6) Modify Group       9) Disable User       12) About
shnouda> 8
```

this script for List Groups

```
nobody ----> (GID: 65534)
shnouda ----> (GID: 1001)
sos ----> (GID: 1002)
hoda ----> (GID: 1003)
sameh ----> (GID: 1004)
shnouda> 5
```

this script for Add Group

```
Please Enter the group name that you need to add: soso
Group 'soso' created successfully.
shnouda> 8
```

this script for List Groups

```
nobody ----> (GID: 65534)
shnouda ----> (GID: 1001)
sos ----> (GID: 1002)
hoda ----> (GID: 1003)
sameh ----> (GID: 1004)
soso ----> (GID: 1005)
shnouda>
```

## 9- Disable user(Lock Account)

```
shnouda>
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit
2) Modify User       5) Add Group          8) List Groups        11) Change Password
3) Delete User        6) Modify Group       9) Disable User       12) About
shnouda>
```

this script for List Users

```
nobody ----> (UID: 65534)
shnouda ----> (UID: 1001)
hoda ----> (UID: 1002)
sam ----> (UID: 1003)
shnouda> 9
```

this script for Disable User

```
Please Enter the name of user that you need to Lock his Account: sam
Are you sure to lock 'sam' Account ( yes,no ): yes
sam Account is Locked successfully..!
shnouda>
```



## 10- Enable User Account

```
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit
2) Modify User       5) Add Group         8) List Groups       11) Change Password
3) Delete User       6) Modify Group      9) Disable User      12) About
shnouda> 10
```

this script for Enable User

```
Please Enter the name of user that you need to UnLook his Account: sam
Are you sure to unlock 'sam' Account ( yes,no ): n
unLocking Accoun Cancled
shnouda> 10
```

this script for Enable User

```
Please Enter the name of user that you need to UnLook his Account: sam
Are you sure to unlock 'sam' Account ( yes,no ): yes
sam Account is unlocked successfully..!
shnouda>
```

## 11- Change password

```
shnouda>
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit
2) Modify User       5) Add Group         8) List Groups       11) Change Password
3) Delete User       6) Modify Group      9) Disable User      12) About
shnouda> 11
```

this script for Change Password

```
enter the username that you need to change Password: sam
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
shnouda>
```

## 12- About

```
shnouda>
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit
2) Modify User       5) Add Group          8) List Groups       11) Change Password
3) Delete User       6) Modify Group       9) Disable User      12) About
shnouda> 12

=====
Shnouda's Admin Tool
=====
Shnouda's Admin Tool is a comprehensive Bash-based system administration utility designed for managing users and groups on Linux systems.

Features include:
- User Management: Add, delete, modify, and list users.
- Group Management: Add, delete, modify, and list groups.
- Account Control: Lock or unlock user accounts.
- Password Management: Change user passwords easily.
- Interactive Menu: User-friendly menu interface to perform administrative tasks efficiently.
- Human-Centric: Designed to handle 'human' users and groups (UID/GID ≥ 1000), avoiding system accounts.
- Security: Requires root privileges to run, ensuring only authorized administrators can make changes.

Purpose:
Simplify routine Linux user and group management tasks for system administrators, providing a single interface for multiple operations while maintaining security and auditability.

Developed by: Shnouda
=====
```

## 13- Exiting

```
shnouda>
1) Add User          4) List Users        7) Delete Group      10) Enable User      13) Exit
2) Modify User       5) Add Group          8) List Groups       11) Change Password
3) Delete User       6) Modify Group       9) Disable User      12) About
shnouda> 13

Exiting...!
shnouda@sh-nabil710:~$
```