Administrative Helper

Project Overview:

A Bash Script Command Line tool that helps Linux Administrators to administrate Linux Systems smoothly.

Project Description:

This project is a menu-driven script that automates common user and group management tasks in Linux.

Key Features:
- Add, modify, and delete users/groups
- Manage group memberships
- Enable/disable user accounts
- List all users/groups on the system
- Change user passwords

Supervised By: Eng. Romany Nageh

Implemented By: Mostafa Mahmoud

Script overview:

```bash
1   #!/bin/bash
2
3   # Administrative Helper , take an option from user and perform a task.
4
5   while true; do
6
7
8       echo "Welcome $USER to Administrative Helper"
9       echo "------------------------------------"
10      echo "Please select an option from the menu below:"
11      echo "------------------------------------"
12      echo "1-->  Add a new user"
13      echo "2-->  Delete user account"
14      echo "3-->  Modify an existing user"
15      echo "4-->  Disable user account"
16      echo "5-->  Enable user account"
17      echo "6-->  Change user password"
18      echo "7-->  List users"
19      echo "8-->  Delete user account with home directory"
20      echo "9-->  Delete user account without home directory"
21      echo "10--> Add a new group"
22      echo "11--> Modify an existing group"
23      echo "12--> List groups"
24      echo "13--> Delete a group"
25      echo "14--> Add user to group"
26      echo "15--> Exit"
27      echo "------------------------------------"
28      read -p "Enter your choice (1-15): " choice
29
30      case $choice in
31
32      1)
33          read -p "Enter username for new user: " username
34          useradd -m "$username"
35          echo "User $username added successfully."
36          echo " "
37          ;;
38
39      2)
40          read -p "Enter username to delete: " username
41          userdel "$username"
42          echo "User $username deleted successfully."
43          echo " "
44          ;;
45
46      3)
47          read -p "Enter username to modify: " username
48          read -p "Enter new username: " new_username
49          usermod -d "/home/$new_username" -m -l "$new_username" "$username"
50          echo "User $username modified to $new_username successfully."
51          echo " "
52          ;;
53
54
55      4)
56          read -p "Enter username to disable: " username
57          usermod -L "$username"
58          echo "User $username disabled successfully."
59          echo " "
60          ;;
61
62      5)
63          read -p "Enter username to enable: " username
64          usermod -U "$username"
65          echo "User $username enabled successfully."
66          echo " "
67          ;;
68
69       6)
70          read -p "Enter username to change password: " username
71          read -s -p "Enter new password: " password
72          echo "$password" | passwd --stdin "$username"
73          echo "Password for user $username changed successfully."
74          echo " "
75          ;;
76
```

```bash
    7)
        echo "List of users:"
        cut -d: -f1 /etc/passwd
        echo " "
        ;;


    8)
        read -p "Enter username to delete with home directory: " username
        userdel -r "$username"
        echo "User $username and home directory deleted successfully."
        echo " "
        ;;


    9)
        read -p "Enter username to delete without home directory: " username
        userdel "$username"
        echo "User $username deleted successfully."
        echo " "
        ;;


    10)
        read -p "Enter group name to add: " groupname
        groupadd "$groupname"
        echo "Group $groupname added successfully."
        echo " "
        ;;


    11)
        read -p "Enter group name to modify: " groupname
        read -p "Enter new group name: " new_groupname
        groupmod -n "$new_groupname" "$groupname"
        echo "Group $groupname modified to $new_groupname successfully."
        echo " "
        ;;

    12)
         echo "List of groups:"
          cut -d: -f1 /etc/group
        echo " "
          ;;

    13)
        read -p "Enter group name to delete: " groupname
        groupdel "$groupname"
        echo "Group $groupname deleted successfully."
        echo " "
        ;;

    14)
        read -p "Enter username to add to group: " username
        read -p "Enter group name to add user to: " groupname
        usermod -aG "$groupname" "$username"
        echo "User $username added to group $groupname successfully."
        echo " "
        ;;

    15)
        echo "Exiting the Administrative Helper."
        exit 0
        ;;


    *)
        echo "Invalid option. Please try again."
        echo " "
        ;;
    esac
done

# End of the script

# Note: This script requires root privileges to execute user and group management commands.
# You can run it with sudo: sudo ./filename
```

1) Add a new user

```
1-->  Add a new user
2-->  Delete user account
3-->  Modify an existing user
4-->  Disable user account
5-->  Enable user account
6-->  Change user password
7-->  List users
8-->  Delete user account with home directory
9-->  Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
-------------------------------------
Enter your choice (1-15): 1
Enter username for new user: mostafa
User mostafa added successfully.
```

```
Enter your choice (1-15): 7
List of users:


  dnsmasq
  mostafa
```

2) Delete user account

```
1-->  Add a new user
2-->  Delete user account
3-->  Modify an existing user
4-->  Disable user account
5-->  Enable user account
6-->  Change user password
7-->  List users
8-->  Delete user account with home directory
9-->  Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
-------------------------------------
Enter your choice (1-15): 2
Enter username to delete: mostafa
User mostafa deleted successfully.
```

```
Enter your choice (1-15): 7
List of users:


  kc-internal
  dnsmasq
```

3) Modify an existing user

```
1-->  Add a new user
2-->  Delete user account
3-->  Modify an existing user
4-->  Disable user account
5-->  Enable user account
6-->  Change user password
7-->  List users
8-->  Delete user account with home directory
9-->  Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
-----------------------------------
Enter your choice (1-15): 3
Enter username to modify: ali
Enter new username: rana
User ali modified to rana successfully.
```

```
dnsmasq
rana
```

4) Disable user account

```
rana:$y$j9T$Wk0am7kj32.ByR91D5aXB0$v
ubuntu:~$
```

```
1-->  Add a new user
2-->  Delete user account
3-->  Modify an existing user
4-->  Disable user account
5-->  Enable user account
6-->  Change user password
7-->  List users
8-->  Delete user account with home directory
9-->  Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
-----------------------------------
Enter your choice (1-15): 4
Enter username to disable: rana
User rana disabled successfully.
```

```
rana:!$y$j9T$Wk0am7kj32.ByR91D5aXB0$vWDCGq9a
ubuntu:~$
```

5) Enable user account

```
rana:!$y$j9T$Wk0am7kj32.ByR91D5aXB0$vWDCGq9a
ubuntu:~$ []
```

```
1--> Add a new user
2--> Delete user account
3--> Modify an existing user
4--> Disable user account
5--> Enable user account
6--> Change user password
7--> List users
8--> Delete user account with home directory
9--> Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
-----------------------------------
Enter your choice (1-15): 5
Enter username to enable: rana
User rana enabled successfully.
```

```
rana:$y$j9T$Wk0am7kj32.ByR91D5aXB0$v
ubuntu:~$ []
```

6) Change user Password

```
1-->   Add a new user
2-->   Delete user account
3-->   Modify an existing user
4-->   Disable user account
5-->   Enable user account
6-->   Change user password
7-->   List users
8-->   Delete user account with home directory
9-->   Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
-----------------------------------
Enter your choice (1-15): 6
Enter username to change password: rana
Enter new password: Changing password for user rana.
passwd: all authentication tokens updated successfully.
Password for user rana changed successfully.
```

7) List All Users

8) Delete user account with its home directory

```
[mostafa@server ~]$ ls /home
harry   mostafa   natasha   rana   remotelogin   sarah   server   test
[mostafa@server ~]$
```

```
1-->   Add a new user
2-->   Delete user account
3-->   Modify an existing user
4-->   Disable user account
5-->   Enable user account
6-->   Change user password
7-->   List users
8-->   Delete user account with home directory
9-->   Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
------------------------------------
Enter your choice (1-15): 8
Enter username to delete with home directory: rana
User rana and home directory deleted successfully.
```

```
[mostafa@server ~]$ ls /home
harry   mostafa   natasha   remotelogin   sarah   server   test
[mostafa@server ~]$
```

9) Delete user account without its home directory

```
[mostafa@server ~]$ ls /home
harry   mostafa   natasha   remotelogin   sarah   server   test
[mostafa@server ~]$
```

```
1-->   Add a new user
2-->   Delete user account
3-->   Modify an existing user
4-->   Disable user account
5-->   Enable user account
6-->   Change user password
7-->   List users
8-->   Delete user account with home directory
9-->   Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
------------------------------------
Enter your choice (1-15): 9
Enter username to delete without home directory: harry
User harry deleted successfully.
```

```
[mostafa@server ~]$ ls /home
harry   mostafa   natasha   remotelogin   sarah   server   test
[mostafa@server ~]$
```

10) Add a new group

```
1-->  Add a new user
2-->  Delete user account
3-->  Modify an existing user
4-->  Disable user account
5-->  Enable user account
6-->  Change user password
7-->  List users
8-->  Delete user account with home directory
9-->  Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
------------------------------------
Enter your choice (1-15): 10
Enter group name to add: testtest
Group testtest added successfully.
```

```
production5
test
testtest
```

11) Modify an existing group by changing group name

```
1-->  Add a new user
2-->  Delete user account
3-->  Modify an existing user
4-->  Disable user account
5-->  Enable user account
6-->  Change user password
7-->  List users
8-->  Delete user account with home directory
9-->  Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
----------------------------------
Enter your choice (1-15): 11
Enter group name to modify: testtest
Enter new group name: newnew
Group testtest modified to newnew successfully.
```

```
production5
test
newnew
```

12) List All Groups

13) Delete a group

```
1-->  Add a new user
2-->  Delete user account
3-->  Modify an existing user
4-->  Disable user account
5-->  Enable user account
6-->  Change user password
7-->  List users
8-->  Delete user account with home directory
9-->  Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
-----------------------------------
Enter your choice (1-15): 13
Enter group name to delete: newnew
Group newnew deleted successfully.
```

```
production5
test
```

14) Add user to a group

```
1-->  Add a new user
2-->  Delete user account
3-->  Modify an existing user
4-->  Disable user account
5-->  Enable user account
6-->  Change user password
7-->  List users
8-->  Delete user account with home directory
9-->  Delete user account without home directory
10--> Add a new group
11--> Modify an existing group
12--> List groups
13--> Delete a group
14--> Add user to group
15--> Exit
--------------------------------------
Enter your choice (1-15): 14
Enter username to add to group: mostafa
Enter group name to add user to: dev
User mostafa added to group dev successfully.
```

```
[mostafa@server ~]$ id
uid=1000(mostafa) gid=1000(mostafa) groups=1000(mostafa),10(wheel),3002(dev)
```

15) Exit

```
Enter your choice (1-15): 15
Exiting the Administrative Helper.
[mostafa@server ~]$ 
```