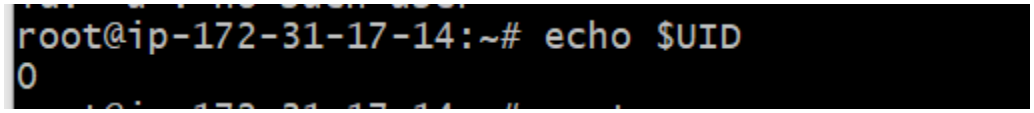
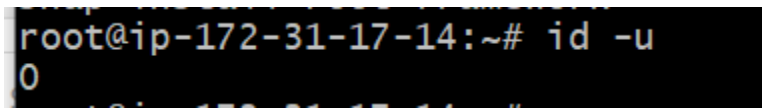
Shell Scripting Project- User creation

Problem statement:
- Script should be executed with the root user else exit with status code 1 and error message
- Script will take 1st argument as user and rest will be treated as comment.
- Auto generate password for the user.
- Upon successful execution of script, display- Username, Password, Host

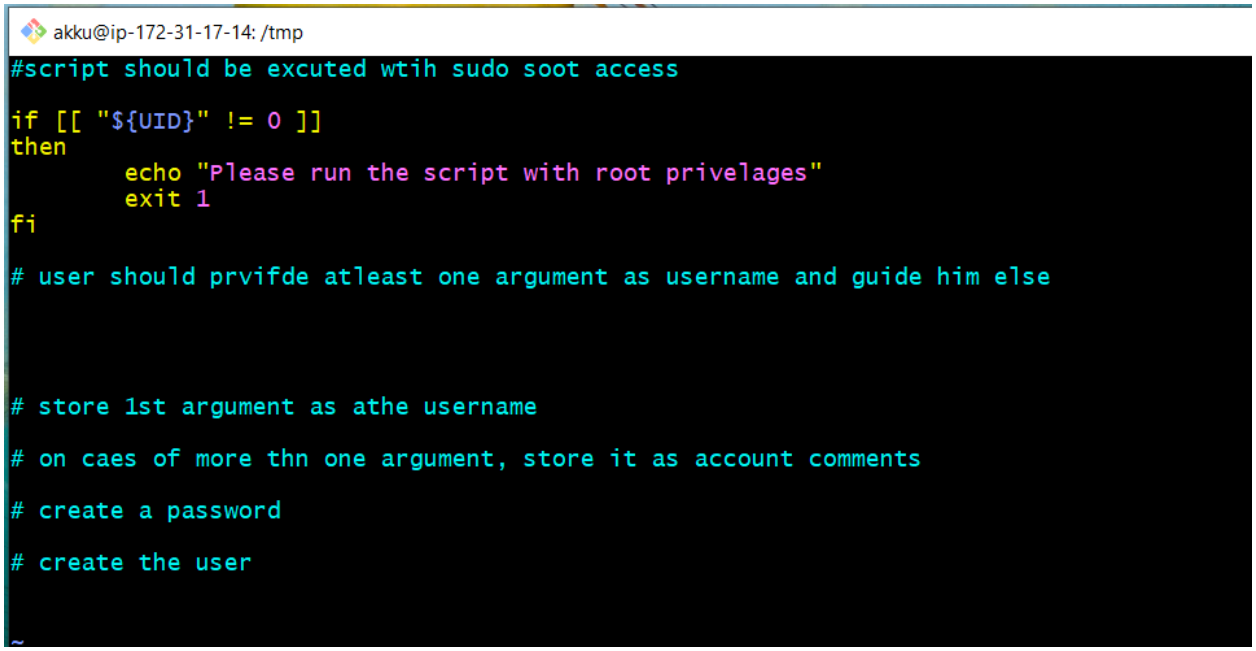
Execution :

1. UID
   User identifier- a unique identifier used to determine the user id
   The root user has always UID as 0



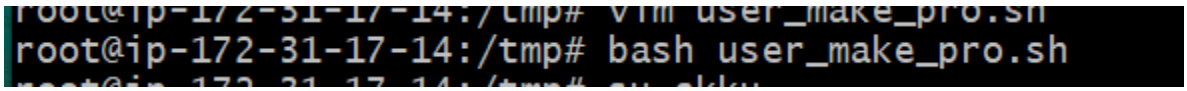


 We will create a script file named user_make_pro.sh in the /tmp directory as it is common directory for all the users.

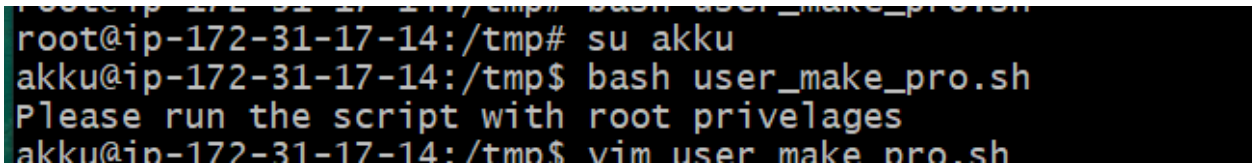


Here,
The 1st if conditions is checking if UID is zero or not. It will make sure that our user is root.

Running the script in the root user privileges



It will successfully execute. But if we run the script with another user



It throws an error

Our 1st script is successfully running

2. Now we will script the condition- when user provide just one argument so guide him for adding username / comments.

```
# user should prvifde atleast one argument as username and guide him else
if [[ "${#}" -lt 1 ]]
then
        echo "Usage: ${0} Username [comment]"
        echo "add a username after the script run command with comments if you want"
        exit 1
fi


# store 1st argument as athe username
```

Here we are giving condition to the shell, if the count if user input is less than 1, give user message to mention username and comment in the input commands

```
root@ip-172-31-17-14:/tmp# bash user_make_pro.sh
Usage: user_make_pro.sh Username [comment]
add a username after the script run command with comments if you want
root@ip-172-31-17-14:/tmp# bash user_make_pro.sh Akshit [this is my comment]
root@ip-172-31-17-14:/tmp# vim user_make_pro.sh
```

3. The third step will be, 2nd argument by the user should be considered as the username

```
# store 1st argument as athe username
User_name="${1}"
echo $User_name
```

Here, "${1}" is considered as the 2nd argument by the user

```
root@ip-172-31-17-14:/tmp# bash user_make_pro.sh Akshit
Akshit
```

4. The Fourth step will be, the arguments after the 2nd argument should be considered as the comment

```
# store 1st argument as athe username
User_name="${1}"
echo "Username: $User_name"


# on caes of more thn one argument, store it as account comments
shift
COMMENT="${@}"
echo "The Comment is - $COMMENT"


# create a password
```

Here we are defining the shift function, which shifts the previous arguments to the left and stores remaining argument defined by @ in the variable.

```
root@ip-172-31-17-14:/tmp# bash user_make_pro.sh Akshit This is a new user
Username: Akshit
The Comment is - This is a new user
```

5. Now we will create the password which will be auto generated and unique every time. We can use date different formats combined every time to generate a new password

```
root@ip-172-31-17-14:/tmp# date +%s
1699109578
root@ip-172-31-17-14:/tmp# date +%N
992084246
root@ip-172-31-17-14:/tmp# date +%s+%N
1699109622+394159065
root@ip-172-31-17-14:/tmp# date +%s%N
1699109632188560169
```

```
# on caes of more thn one argument, store it as account comments
shift
COMMENT="${@}"
echo "The Comment is - $COMMENT"


# create a password
password=$(date +%s%N)
echo $password
```

```
root@ip-172-31-17-14:/tmp# bash user_make_pro.sh Akshit This is comment
Username: Akshit
The Comment is - This is comment
1699109883860221128
```

6. Now we will create the user

   We will provide the variable of username and comments in this command

```
#create the user
useradd -c "$comment" -m $username
```

```
root@ip-172-31-17-14:/tmp# bash user_make_pro.sh Akshit comment
The username you haev enetered is - Akshit
the comments are - comment
1699113566957815456
```

```
root@ip-172-31-17-14:/tmp# cut -d: -f1 /etc/passwd
root
daemon
bin
sys
sync
games
man
lp
mail
news
uucp
proxy
www-data
backup
list
irc
gnats
nobody
systemd-network
systemd-resolve
messagebus
systemd-timesync
syslog
_apt
tss
uuidd
tcpdump
sshd
pollinate
landscape
fwupd-refresh
ec2-instance-connect
_chrony
ubuntu
lxd
akku
Akshit
```

The last user is can be seen as Akshit successfully

7. Check if the user was successfully generated or not

```
#Check if the user is successfully created or not
if [[ $? != 0 ]]
then
        echo "The user cannot be generated"
        exit 1
else
        echo "the user has been succesfully created"
fi
```

$? Checks if the previous step was executed or not

```
root@ip-172-31-17-14:/tmp# bash user_make_pro.sh Akshit comment
The username you haev enetered is - Akshit
the comments are - comment
1699114109593788008
useradd: user 'Akshit' already exists
The user cannot be generated
```

```
root@ip-172-31-17-14:/tmp# bash user_make_pro.sh akshit2 comment
The username you haev enetered is - akshit2
the comments are - comment
1699114418208353123
the user has been succesfully created
root@ip-172-31-17-14:/tmp# 2
```

8. Add the password to the user

```
#Set the password for the user
echo -e "$password\n$password" | sudo usermod -p "$(openssl passwd -1 -stdin "$password")" "$username"
```

We have assigned the generated password to the given user

9. Check if password was successfully set or not

```
# Check if the password is succefully set or not
if [[ $? != 0 ]]
then
        echo "The password cannot be set"
        exit 1
else
        echo "the password has been set successfully"
fi
```

10. After password is successfully set, force the user to generate the new password when logging in to the user account

```
# Force passwword to change on first login by user
passwd -e $username
```

11. Display details of the user account

```
# Display the usernme , password, and teh host where user his created
echo "Username - $username"
echo "Password- $password"
echo $(hostname)
```

12. The OUTPUT

```
root@ip-172-31-17-14:/tmp# bash user_make_pro.sh IAmAUser My Comments
The username you haev enetered is - IAmAUser
the comments are - My Comments
password is 1699121797499269195
the user has been succesfully created
passwd: Use -help for summary.
the password has been set successfully
passwd: password expiry information changed.
Username - IAmAUser
Password- 1699121797499269195
ip-172-31-17-14
root@ip-172-31-17-14:/tmp# su IAmAUser
You are required to change your password immediately (administrator enforced).
New password:
Retype new password:
$
$ pwd
/tmp
```

The user has been generated successfully.

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