Advanced Linux Shell Scripting for DevOps Engineers with User management- Day 5

1. **You have to do the same using Shell Script i.e using either Loops or command with start day and end day variables using arguments –**
   So, write a bash script createDirectories.sh that when the script is executed with three given arguments (one is directory name and second is start number of directories and third is the end number of directories) it creates specified number of directories with a dynamic directory name.
   - #!/bin/bash
     for((i=$2; i<=$3; i++))
     do
     mkdir 1i
     done

```
#!/bin/bash
for((i=$2; i<=$3; i++))
do
        mkdir $1$i
done
```

Output:

```
ubuntu@ip-172-31-44-115:~/Day5$ ./Task1.sh Day 1 5
ubuntu@ip-172-31-44-115:~/Day5$ ls
Day1  Day2  Day3  Day4  Day5  Task1.sh
ubuntu@ip-172-31-44-115:~/Day5$
```

2. **Create a Script to backup all your work done till now.**
   - #!/bin/bash
     src_dir=/home/ubuntu/Day5/scripts
     tgt_dir=/home/ubuntu/Day5/backups

     current_timestamp=$(date "+%Y%m%d-%H:%M:%S")
     backup=$tgt_dir/$current_timestamp.tgz

     echo “Taking backup of $src_dir on $current_timestamp”

     tar czf $backup -P $src_dir

     echo “Taking backup at $tgt_dir”

echo "Backup is completed..!"

```
#!/bin/bash
src_dir=/home/ubuntu/Day5/scripts
tgt_dir=/home/ubuntu/Day5/backups

current_timestamp=$(date "+%Y%m%d-%H:%M:%S")
backup=$tgt_dir/$current_timestamp.tgz

echo "Taking backup of $src_dir on $current_timestamp"

tar czf $backup -P $src_dir

echo "Taking backup at $tgt_dir"
echo "Backup is completed..!"
~
```

Output:

```
ubuntu@ip-172-31-44-115:~/Day5$ ./BackupTask2.sh
Taking backup of /home/ubuntu/Day5/scripts on 20230214-12:16:04
Taking backup at /home/ubuntu/Day5/backups
Backup is completed..!
ubuntu@ip-172-31-44-115:~/Day5$ cd backups/
ubuntu@ip-172-31-44-115:~/Day5/backups$ ls
20230214-12:15:14.tgz  20230214-12:16:04.tgz
ubuntu@ip-172-31-44-115:~/Day5/backups$
```

3. **Read About Cron and Crontab, to automate the backup Script.**
   - Cron is the system's main scheduler for running jobs or tasks unattended.
   - A command called crontab allows the user to submit, edit or delete entries to cron.
   - A crontab file is a user file that holds the scheduling information.

   - Crontab -e

     * 18 * * * bash /home/ubuntu/Day5/BackupTask2.sh

```
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
* 18 * * * bash /home/ubuntu/Day5/BackupTask2.sh
```

Output:

```
ubuntu@ip-172-31-44-115:~/Day5/backups$ ls -l
total 24
-rw-rw-r-- 1 ubuntu ubuntu 134 Feb 14 18:39 20230214-18:39:01.tgz
-rw-rw-r-- 1 ubuntu ubuntu 134 Feb 14 18:40 20230214-18:40:02.tgz
-rw-rw-r-- 1 ubuntu ubuntu 134 Feb 14 18:41 20230214-18:41:01.tgz
-rw-rw-r-- 1 ubuntu ubuntu 134 Feb 14 18:42 20230214-18:42:01.tgz
-rw-rw-r-- 1 ubuntu ubuntu 134 Feb 14 18:43 20230214-18:43:01.tgz
-rw-rw-r-- 1 ubuntu ubuntu 134 Feb 14 18:44 20230214-18:44:01.tgz
ubuntu@ip-172-31-44-115:~/Day5/backups$
```

5. Create 2 users and just display their Usernames.

- sudo useradd pahilauser
  sudo passwd pahilauser

- sudo useradd dusrauser
  sudo passwd dusrauser

```
ubuntu@ip-172-31-44-115:~$ sudo useradd pahilauser
ubuntu@ip-172-31-44-115:~$ sudo passwd pahilauser
New password:
Retype new password:
passwd: password updated successfully
ubuntu@ip-172-31-44-115:~$ sudo useradd dusrauser
ubuntu@ip-172-31-44-115:~$ sudo passwd dusrauser
New password:
Retype new password:
passwd: password updated successfully
ubuntu@ip-172-31-44-115:~$
```

To check if users are added or not:

- cat cd /etc/passwd

```
sshd:x:109:65534::/run/sshd:/usr/sbin/nologin
pollinate:x:110:1::/var/cache/pollinate:/bin/false
landscape:x:111:116::/var/lib/landscape:/usr/sbin/nologin
fwupd-refresh:x:112:117:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin
ec2-instance-connect:x:113:65534::/nonexistent:/usr/sbin/nologin
_chrony:x:114:121:Chrony daemon,,,:/var/lib/chrony:/usr/sbin/nologin
ubuntu:x:1000:1000:Ubuntu:/home/ubuntu:/bin/bash
lxd:x:999:100::/var/snap/lxd/common/lxd:/bin/false
postfix:x:115:123::/var/spool/postfix:/usr/sbin/nologin
pahilauser:x:1001:1001::/home/pahilauser:/bin/sh
dusrauser:x:1002:1002::/home/dusrauser:/bin/sh
ubuntu@ip-172-31-44-115:~$
```