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## CYSE 270: Linux System for Cybersecurity

### Assignment-9

#### Task A - Backup your system (Using crontab) [100 points]

**Scenario:** Performing system backup can be time-consuming, and the process is often overlooked. For this scenario:

1. **(10 Points)** Create a new user **Alice (with home directory)**.

```
(niayaf@niayaf)~]
└─$ sudo useradd -m Alice
[sudo] password for niayaf:
```

2. **(50 Points)** Write a shell script that backups Alice's home directory by creating a tar file (tape archive), using the following steps:
  - a. Do the following:
    - Take **2 inputs** with their values- your **MIDAS** name and **current date (for example, midas=Mohammed)**.
    - Create a variable named as **filename** that should be assigned the value as **MIDAS-date** (example output after executing the script would be like, **Mohammed-2024.11.04-22.08.01.tar.gz**).
    - Using **tar** command, create a tape archive for Alice's home directory (/home/Alice) and the **filename** created above (in step-2-ii). (Please learn about tar command in Linux for its usage)
  - b. Move the tape archive file/tar file (created in step 2-iii) to /var/backups/ directory using correct command in linux.

- c. To optimize the disk usage, pick a compression algorithm (bz2, gzip, or xv) to compress the tar file you created in /var/backups/ in the previous step-2b.

```
#!/bin/bash
midas=nfull005
current_date=$(date+%Y.%m.%d-%H.%M)
filename=$midas-$current_date
tar -cvf /var/backups/$filename /home/Alice
gzip /var/backups/$filename
```

3. **(30 Points)** Create a crontab file to keep the scheduled task running for 3 minutes, then check the contents in the /var/backups directory.

```
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h dom mon dow   command
*/3 * * * * /home/niayaf/AliceScript.sh
```

(I went back and set it to \*/3 \* \* \* \*)

```
(niayaf@niayaf)-[~]
└─$ ls /var/backups
alternatives.tar.0      dpkg.arch.0           dpkg.diversions.1.gz  dpkg.status.0
apt.extended_states.0  dpkg.arch.1.gz       dpkg.statoverride.0   dpkg.status.1.gz
apt.extended_states.1.gz dpkg.diversions.0    dpkg.statoverride.1.gz nfull005-.gz
```

4. **(10 Points)** Cancel the crontab jobs.

```
(niayaf@niayaf)-[~]
└─$ sudo crontab -r
```