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Assignment 9 - Task Automation

Task A - Backup your system (using crontab)

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

```
┌──(tobythebaby㉿kali)-[~]
└─$ sudo useradd -m Alice
```

2. 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.

```
#!/bin/bash

midas=dgilz001
current_date=$(date "+%Y.%m.%d-%H.%M.%S")
```

      - Create a variable named as filename that should be assigned the value as MIDAS-date.

```
#!/bin/bash

midas=dgilz001
current_date=$(date "+%Y.%m.%d-%H.%M.%S")
filename=${midas}-${current_date}.tar
```

      - Using tar command, create a tape archive for Alice's home directory (/home/Alice) and the filename created above.

```
#!/bin/bash

midas=dgilz001
current_date=$(date "+%Y.%m.%d-%H.%M.%S")
filename=${midas}-${current_date}.tar
sudo tar -cvf  /home/Alice
```

   b. Move the tape archive file/tar file to /var/backups/ directory using the correct command in linux.

```
#!/bin/bash

midas=dgilz001
current_date=$(date "+%Y.%m.%d-%H.%M.%S")
filename=${midas}-${current_date}.tar
sudo tar -cvf"/var/backups/${filename}" /home/Alice
```

   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=dgilz001
current_date=$(date "+%Y.%m.%d-%H.%M.%S")
filename=${midas}-${current_date}.tar
sudo tar -cvf"/var/backups/${filename}" /home/Alice
sudo gzip "/var/backups/${filename}"
```

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

```
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# 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

*/3 * * * * /home/tobythebaby/backup.sh
~
```

```
┌──(tobythebaby㉿kali)-[~]
└─$ ls /var/backups
alternatives.tar.0      dgilz001-2025.04.07-21.44.10.tar.gz  dpkg.diversions.0    dpkg.status.0
apt.extended_states.0  dpkg.arch.0                          dpkg.statoverride.0
```

4. Cancel the crontab jobs.

```
┌──(tobythebaby㉿kali)-[~]
└─$ crontab -r

┌──(tobythebaby㉿kali)-[~]
└─$ crontab -l
no crontab for tobythebaby
```