

## Unit 1.1 Graded Assignment: RSYNC

### Instructions:

On a Linux server setup a cron job for copying example data with rsync periodically.

Ensure the copying is handled in the background and independently of the user session.

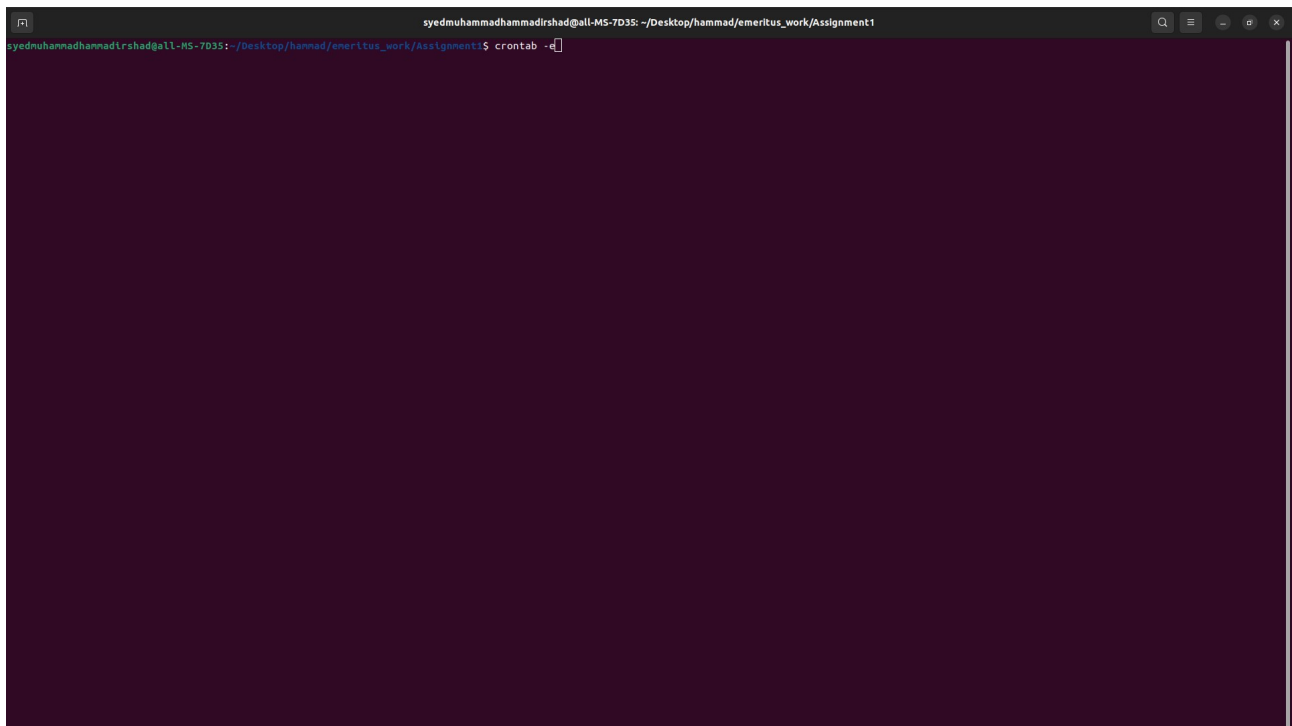
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### Solution:

In this assignment we have implemented cron job with rsync which backups all the data after every minute. As per our understanding Cron job is used to automate the repetitive task through linux terminal. As far as rsync is concern it is used to compile, backup, copy files from one directory to another. We have implemented both in this assignment. The screenshot describe below shows our understanding and implementation.

1. First we write crontab -e to enter cron job terminal.



2. In the cron tab terminal we have written the rsync command i.e.

```
* * * * * rsync -r  
/home/syedmuhammadhammadirshad/Desktop/hammad/emeritus_work/Assignment1/  
docs/  
/home/syedmuhammadhammadirshad/Desktop/hammad/emeritus_work/Assignment1/  
backup/
```

Where,

- \* \* \* \* \* = shows that this task will run after every minute.

- Rsync = it is the conventional statement to implement rsync functionality.
- - r = this will recursively copy the directory as well as sub directory to our destination directory.
- /home/syedmuhammadhammadirshad/Desktop/hammad/emeritus\_work/Assignment1/docs/ = is our source directory
- /home/syedmuhammadhammadirshad/Desktop/hammad/emeritus\_work/Assignment1/backup/ = This is the location of our destination directory.

```

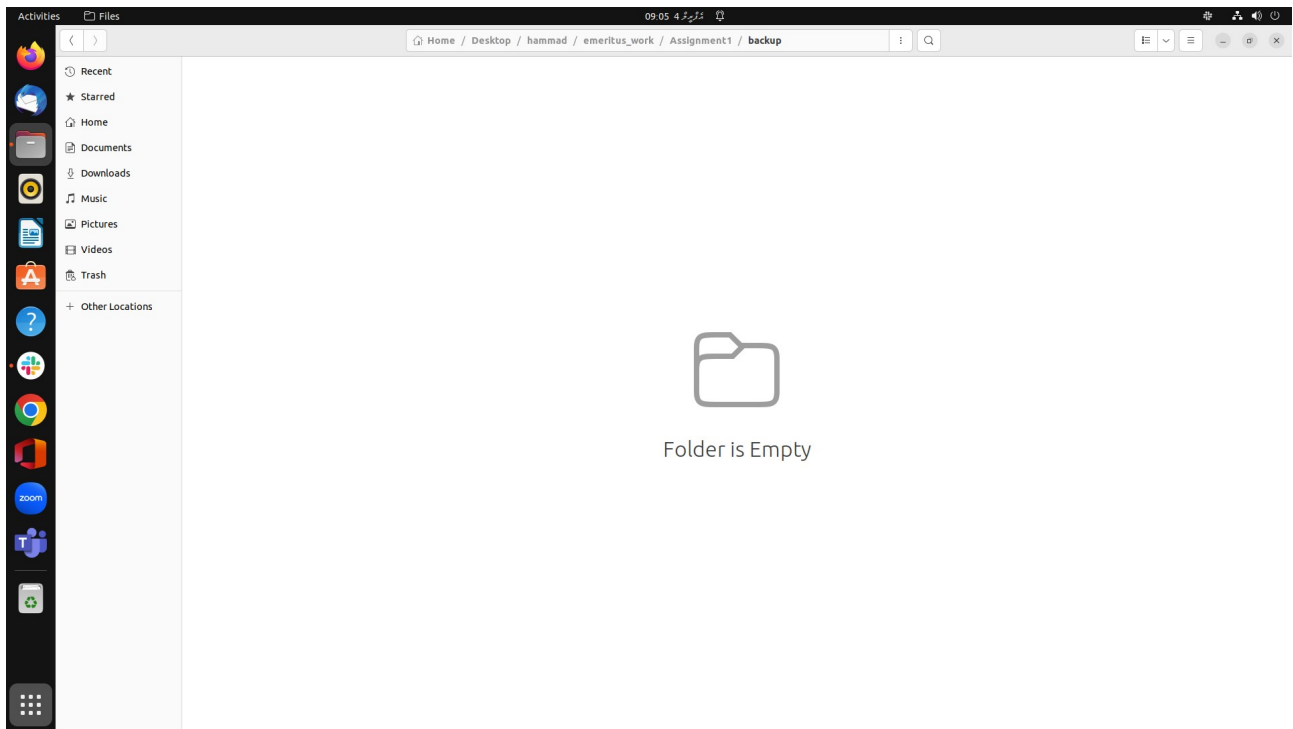
GNU nano 6.2 /tmp/crontab.fff14u/crontab
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete 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
* * * * * rsync -r /home/syedmuhammadhammadirshad/Desktop/hammad/emeritus_work/Assignment1/docs/ /home/syedmuhammadhammadirshad/Desktop/hammad/emeritus_work/Assignment1/backup/

```

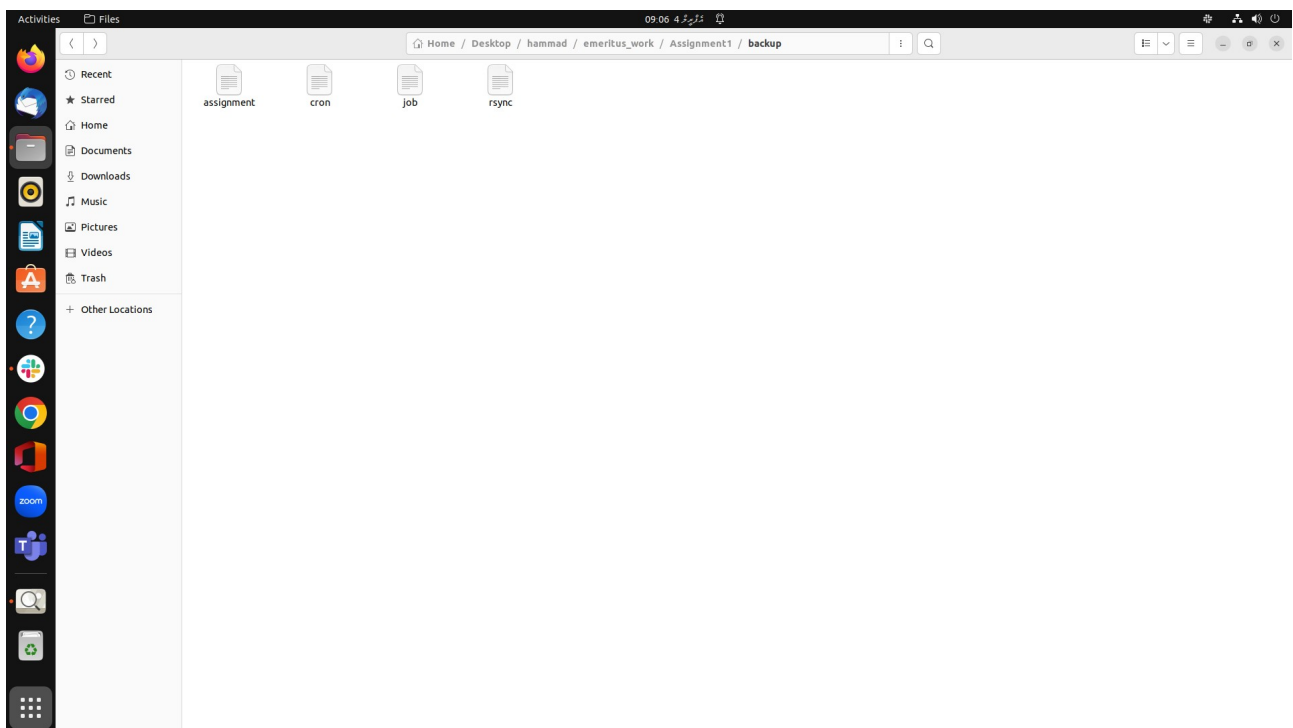
3. After 1 minute we can see that the files are transferred from source to destination directory. This is the source directory where we have stored text files.



This is our backup directory before cron job was run



This is our backup directory after our cron job was run



Furthermore, we have implemented the rsync command on different timestamp.  
This cron job will run after every 30 minutes

```
GNU nano 6.2 /tmp/crontab.fff14u/crontab *
# 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').
#
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# 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
30 * * * * rsync -r /home/syedmuhammadhammadirshad/Desktop/hammad/emeritus_work/Assignment1/docs/ /home/syedmuhammadhammadirshad/Desktop/hammad/emeritus_work/Assignment1/backup/
```

This cron job will run after every 10 minutes.

```
GNU nano 6.2 /tmp/crontab.fff14u/crontab
# 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
10 * * * * rsync -r /home/syedmuhammadhammadirshad/Desktop/hammad/emeritus_work/Assignment1/docs/ /home/syedmuhammadhammadirshad/Desktop/hammad/emeritus_work/Assignment1/backup/
```