PRACTICAL -03

Implement the following file management tasks in Hadoop:-

> Adding files and directories

> Retrieving files from HDFS to local file system

> Deleting files from HDFS

1)To give commands in HDFS download the platform putty it gets directly connected with the HDFS dashboard and from where you can give commands to add & delete the files
Download Links-https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html
After downloading open the file and give following details
Host name- maria_dev@1080
Port- 2222
Connection type- SSH
Load server- HDP & Save
After saving you will get to see the command prompt where you have to enter the password which you have been set for your browser dashboard
Password- maria_dev

2)To go in the Hadoop system give the command-

*hadoop fs -ls

The command **hadoop fs -ls** is used to **list files and directories stored in Hadoop Distributed File System (HDFS)** or other supported file systems (like local FS, S3, etc., depending on configuration).
Shows the **files and directories** at the given path.

Displays **metadata**:

- File permissions
- Replication factor
- Owner & group
- File size (in bytes)
- Last modification date & time
- Path

*Hadoop fs -mkdir

The **hadoop fs -mkdir** command is used to **create new directories in Hadoop Distributed File System (HDFS)** (or any other file system supported by Hadoop, like S3, local FS, etc., depending on your configuration)

📌 **Purpose**

- To create a **new directory** in HDFS.

Suppose we will give the command for creating a directory for a movielens dataset
Command- hadoop fs -mkdir ml-100k

*hadoop fs -ls

The **hadoop fs -ls** command is used to **list files and directories in Hadoop Distributed File System (HDFS)** or in any other file system supported by Hadoop (like local FS, S3, etc., depending on configuration)

📌 **Purpose**

- To **view the contents** of a directory in HDFS.
- To **see metadata** of files/directories such as:
    - **Permissions** (read, write, execute)
    - **Replication factor** (for files in HDFS)
    - **Owner** and **Group**
    - **File size** (in bytes)
    - **Modification date & time**
    - **File/Directory name (path)**

***ls**

In **Hadoop**, the ls command is used to **list files and directories** in the Hadoop Distributed File System (**HDFS**)—similar to the ls command in Linux, but it operates on HDFS paths instead of local file system paths.

Purpose:

- To display the list of files/directories in a given HDFS directory.
- To view metadata like **permissions, owner, group, file size, replication factor, modification date, and path**.

***pwd**

📌 **Purpose of pwd in Hadoop**

- pwd stands for **Print Working Directory**.
- It shows the **current working directory in HDFS** where you are operating.
- Useful to confirm your present location before running file operations like ls, put, or get.

***ls**

Command to display the directory

***wget** http://media.sundog-soft.com/hadoop/ml-100k/u.data

The above command is used to copy the data from web server to the Hadoop file system

***ls**

Give the command ls to see whether the data is imported in hdfs
Once it is imported you will see the name as u.data

***ls -la**

📌 **Purpose of ls -la (Linux vs Hadoop)**

- In **Linux**, ls -la lists **all files including hidden ones** (those starting with .), with detailed information (long format).

*hadoop fs -copyFromLocal u.data ml-100k/u.data

The file will get copied from local file system to the Hadoop named as u.data

*hadoop fs -ls

The **hadoop fs -ls** command is used to **list files and directories in Hadoop Distributed File System (HDFS)** or in any other file system supported by Hadoop (like local FS, S3, etc., depending on configuration)

*hadoop fs -rm ml-100k/u.data

📌 **Purpose**

- To **remove (delete) files** from HDFS.
- Works similar to Linux rm, but operates on HDFS.

*hadoop fs -rmdir ml-100k

The **hadoop fs -rmdir** command is used to **remove (delete) empty directories from HDFS**.

📌 **Purpose**

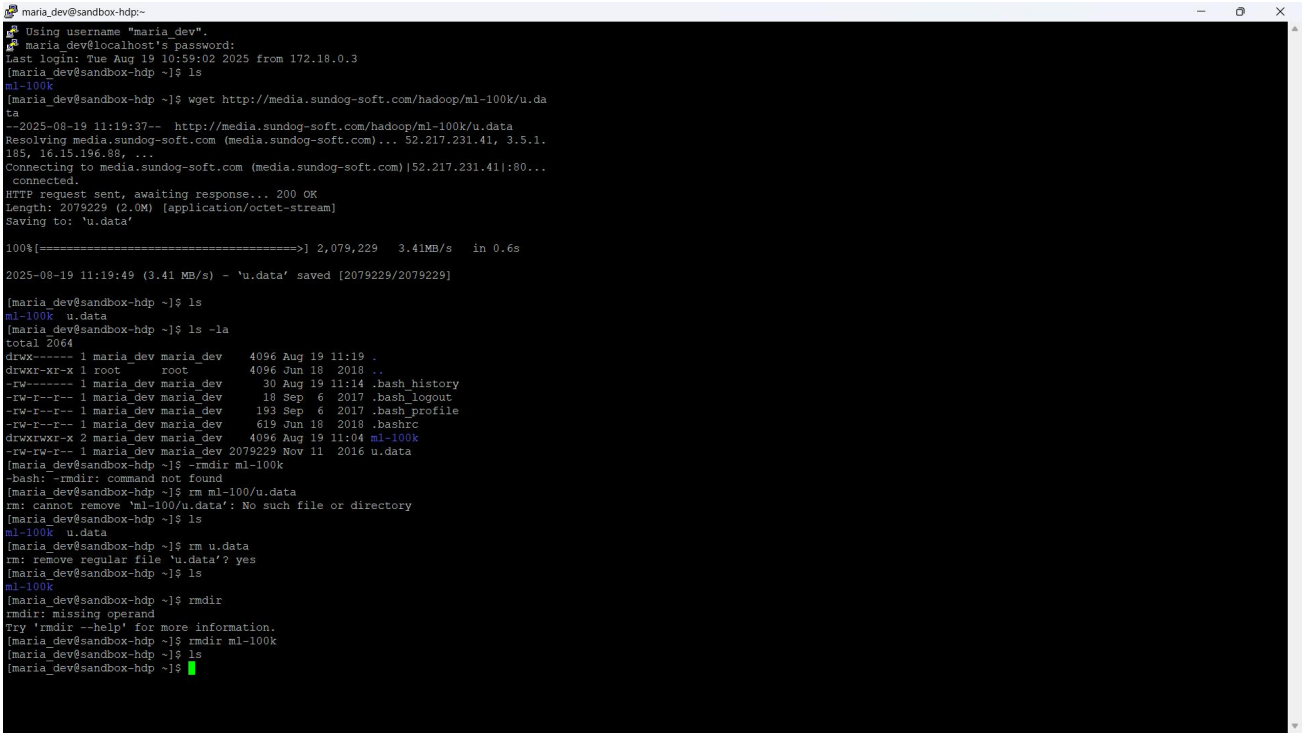
- To delete **empty directories** in Hadoop Distributed File System (HDFS).
- It is similar to the Linux rmdir command.
- ⚠ Unlike -rm -r, it **cannot delete directories that contain files or subdirectories**.

*hadoop fs -ls

The commands checks where the directory is removed from the hadoop

*Hadoop fs

By using this command we may see the activities that we have performed in our Hadoop file system


maria_dev@sandbox-hdp:~
Using username "maria_dev".
maria_dev@localhost's password:
Last login: Tue Aug 19 10:59:02 2025 from 172.18.0.3
[maria_dev@sandbox-hdp ~]$ ls
ml-100k
[maria_dev@sandbox-hdp ~]$ wget http://media.sundog-soft.com/hadoop/ml-100k/u.da
ta
--2025-08-19 11:19:37-- http://media.sundog-soft.com/hadoop/ml-100k/u.data
Resolving media.sundog-soft.com (media.sundog-soft.com)... 52.217.231.41, 3.5.1.
185, 16.15.196.88, ...
Connecting to media.sundog-soft.com (media.sundog-soft.com)|52.217.231.41|:80...
connected.
HTTP request sent, awaiting response... 200 OK
Length: 2079229 (2.0M) [application/octet-stream]
Saving to: 'u.data'
100%[======================================>] 2,079,229 3.41MB/s in 0.6s
2025-08-19 11:19:49 (3.41 MB/s) - 'u.data' saved [2079229/2079229]
[maria_dev@sandbox-hdp ~]$ ls
ml-100k u.data
[maria_dev@sandbox-hdp ~]$ ls -la
total 2064
drwx------ 1 maria_dev maria_dev 4096 Aug 19 11:19 .
drwxr-xr-x 1 root root 4096 Jun 18 2018 ..
-rw------- 1 maria_dev maria_dev 30 Aug 19 11:14 .bash_history
-rw-r--r-- 1 maria_dev maria_dev 18 Sep 6 2017 .bash_logout
-rw-r--r-- 1 maria_dev maria_dev 193 Sep 6 2017 .bash_profile
-rw-r--r-- 1 maria_dev maria_dev 619 Jun 18 2018 .bashrc
drwxrwxr-x 2 maria_dev maria_dev 4096 Aug 19 11:04 ml-100k
-rw-rw-r-- 1 maria_dev maria_dev 2079229 Nov 11 2016 u.data
[maria_dev@sandbox-hdp ~]$ -rmdir ml-100k
-bash: -rmdir: command not found
[maria_dev@sandbox-hdp ~]$ rm ml-100/u.data
rm: cannot remove 'ml-100/u.data': No such file or directory
[maria_dev@sandbox-hdp ~]$ ls
ml-100k u.data
[maria_dev@sandbox-hdp ~]$ rm u.data
rm: remove regular file 'u.data'? yes
[maria_dev@sandbox-hdp ~]$ ls
ml-100k
[maria_dev@sandbox-hdp ~]$ rmdir
rmdir: missing operand
Try 'rmdir --help' for more information.
[maria_dev@sandbox-hdp ~]$ rmdir ml-100k
[maria_dev@sandbox-hdp ~]$ ls
[maria_dev@sandbox-hdp ~]$