Ex.No: 7 **Transfer A File Between Two Virtual Machines**
Date:

AIM:

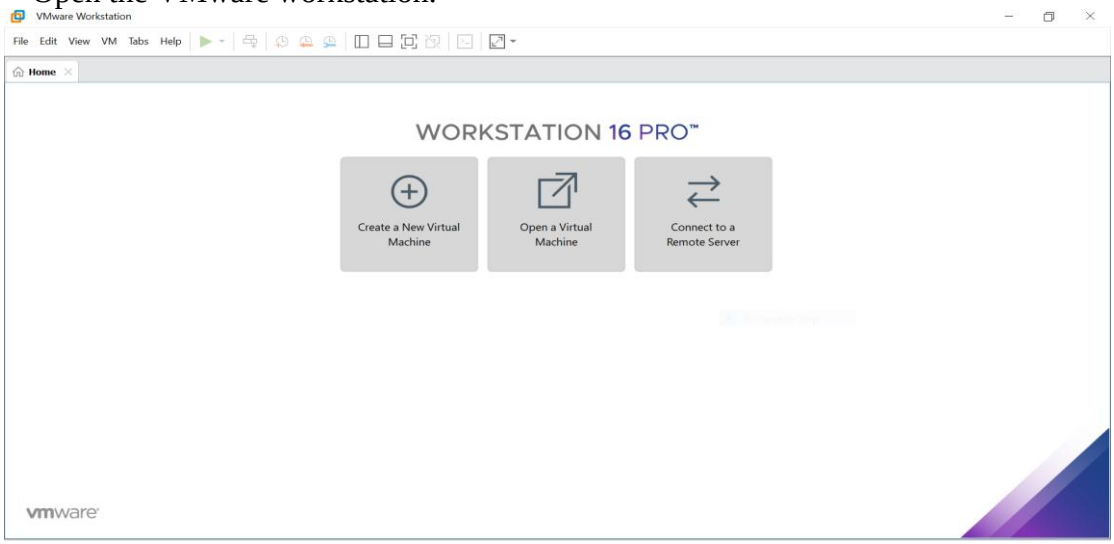
To find a procedure to transfer a file between two independent Virtual machines using Shared folder in VMware Workstation.

PRE-REQUISITES:

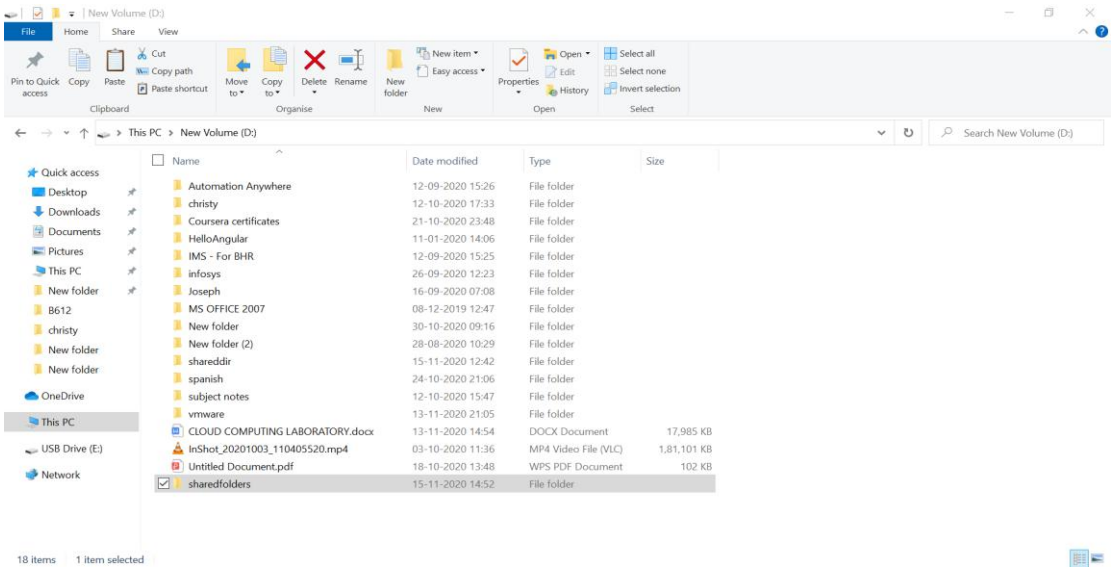
- VMware Workstation
- Two Ubuntu Virtual Machines,
- Text file.

PROCEDURE:

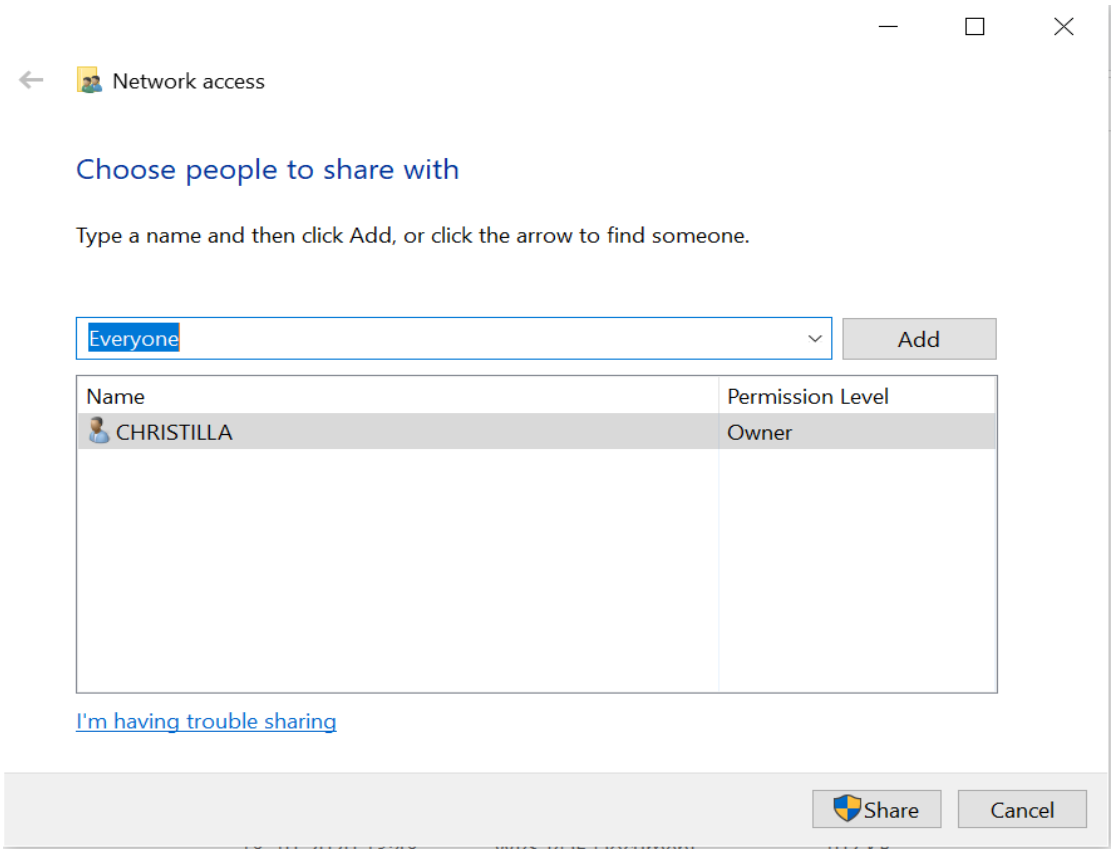
● Open the VMware workstation.



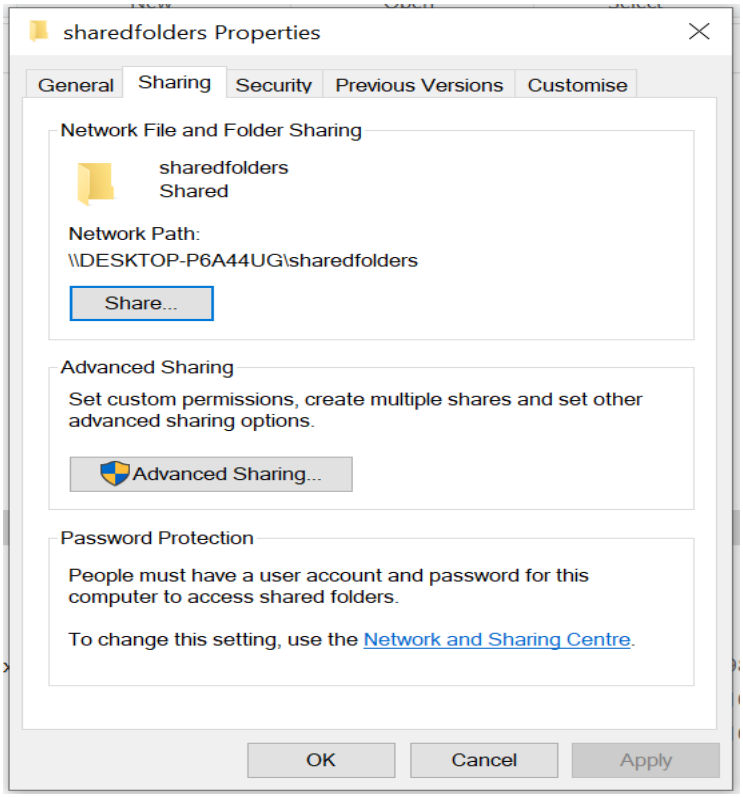
● Before turning on the virtual machines, create a shared folder in the host OS



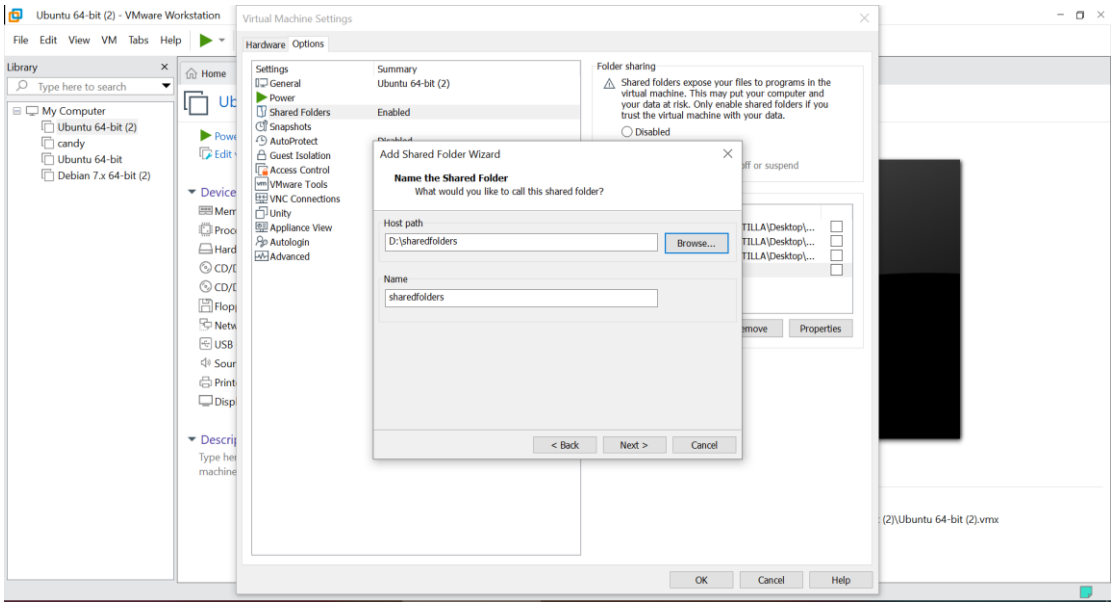
● Choose the people whom you want to share with. Select as everyone.



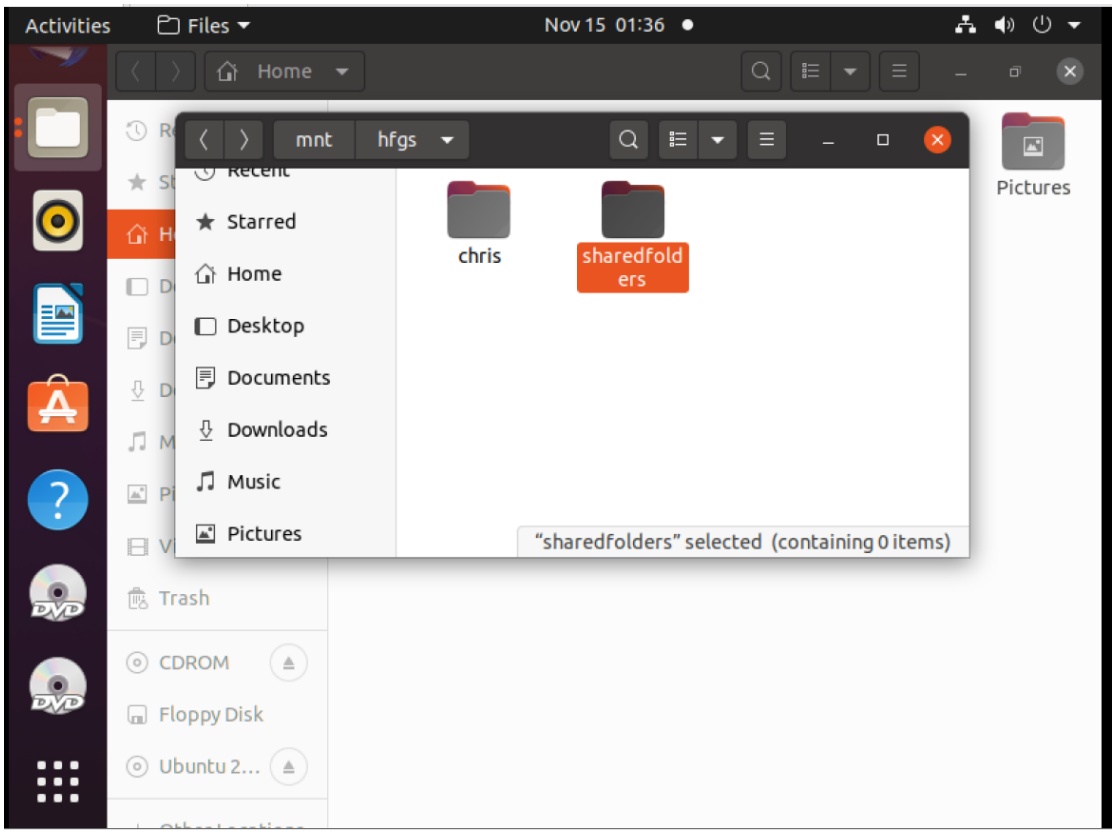
● Configure the Shared folder settings.



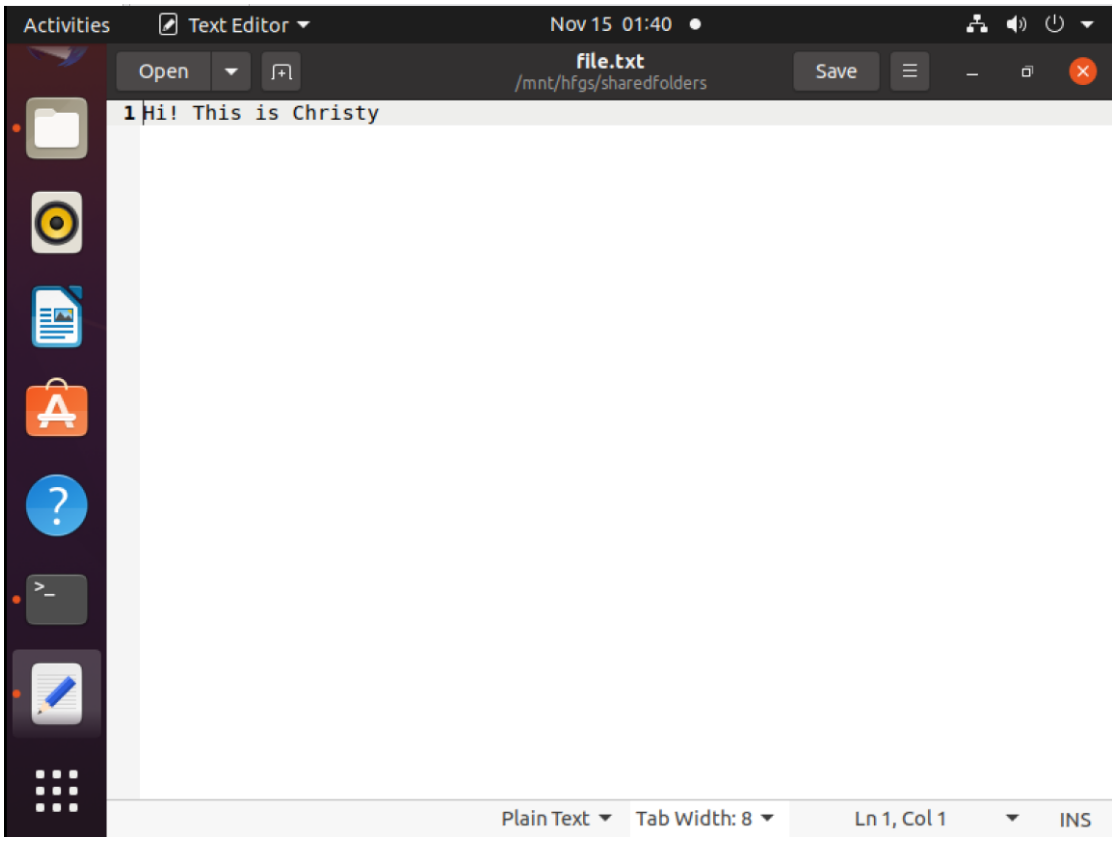
- Click the First Virtual machine and goto **VM - > Settings.** Goto Options and choose Shared Folders and click **Always Enabled**.Add the folder which we want to share.



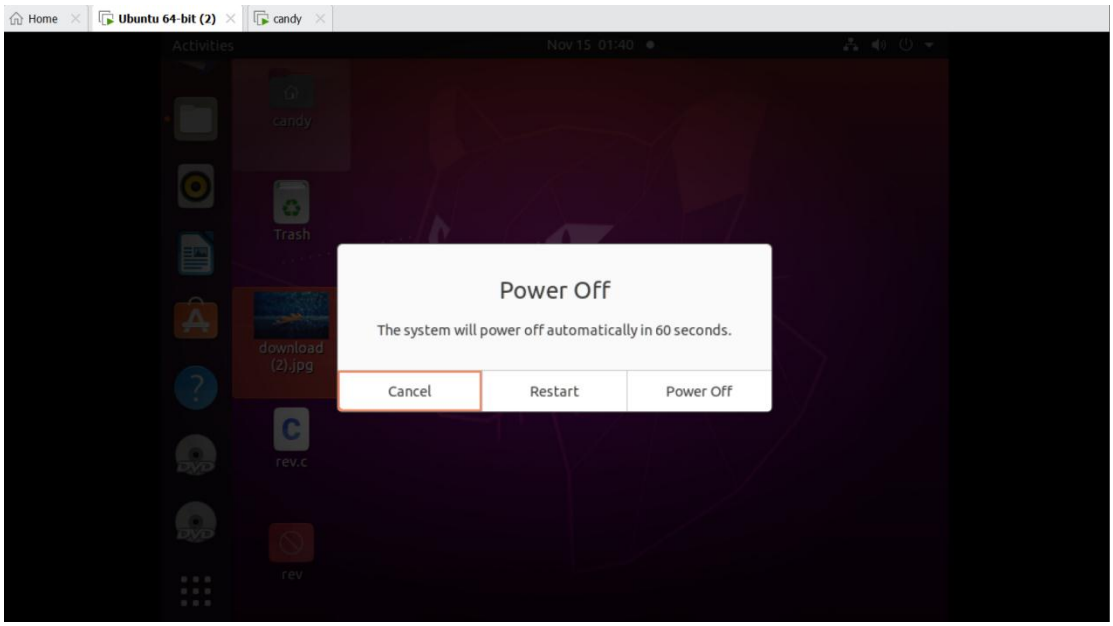
● Click Files and then goto Other locations.Choose Computer ,goto mnt -> hfgs ,so that the shared folder is visible.



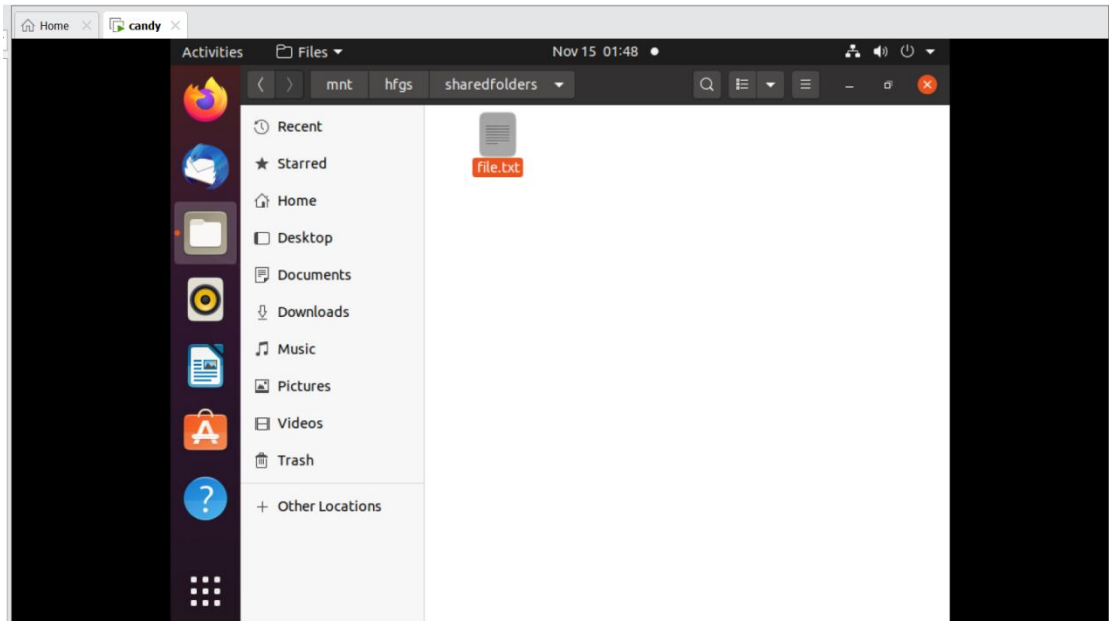
● Now open the file file.txt and edit it's contents.



● Save the file and turn off the first virtual machine.



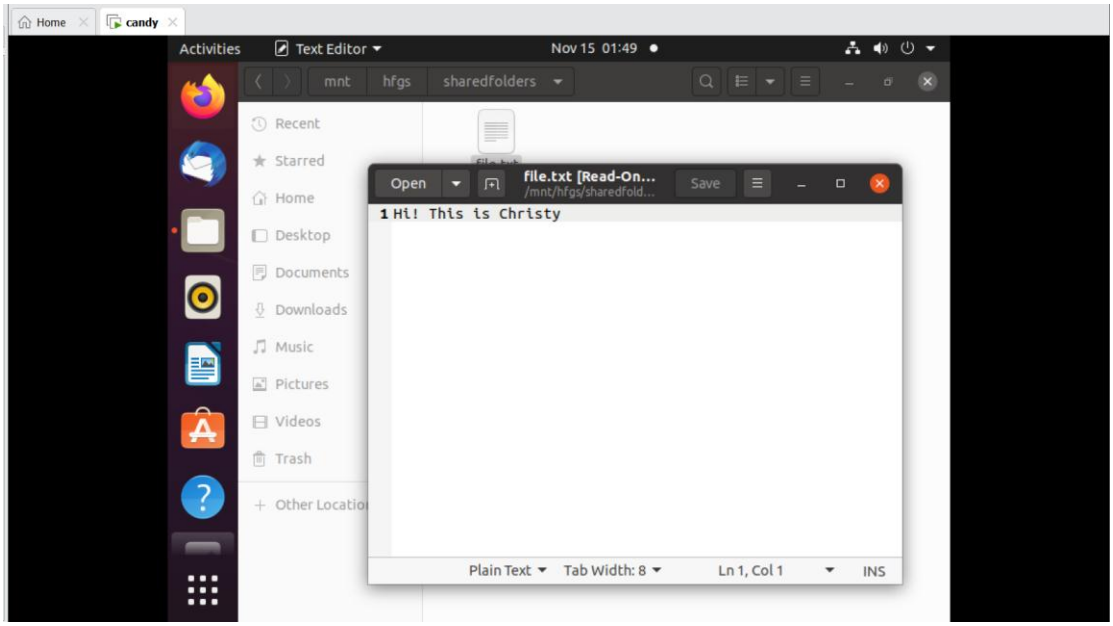
● Turn on the Second Virtual machine and click Files and then click Other locations.Choose Computer ,goto mnt -> hfgs.



● Open the shared folder which you have seen in the previous Virtual machine. Open the folder and open the text file.

● Finally you can see that the file has been transferred from one virtual machine through another virtual machine by using the shared folder method.

OUTPUT:



RESULT:

Thus, the transfer of a file between two virtual machines was successfully implemented using the shared folder procedure as well as the correctness has been proved here successfully

Ex.No: 8. HADOOP SINGLE NODE CLUSTER
Date:

Aim:

To find procedure to set up the one node Hadoop cluster.

Procedure

1. Open VM – new -> full name -> centos7 -> username -> admin password -> confirm password -> admin.
2. Create folder in D drive D: centos7 Hadoop -> after that goto h/w customs and change memory to 4GB.
3. During installation time create user -> right corner user creation
   Fullname : hadoop.
   User : hadoop.
   Password : hadoop.
4. Copy hadoop 3.0.3 and JDK 1.8.0 from windows to hadoop user desktop/root user and extract jar files there itself.
5. Login to Root user : i) $ groupadd cluster
   ii) $usermode –aG cluster hadoop.
6. //Open bashrc file and type the following command in the 'bashrc' file bottom. bashrc file present in computer -> home -> Desktop -> Bashrc.

   //add the following at the end of file
   export JAVA_HOME=jdk1.8.0_45
   export HADOOP_HOME=hadoop-2.6.0
   export PATH=$PATH:$JAVA_HOME/bin:$HADOOP_HOME/bin:$HADOOP/sbin
   export PATH

7. Got to root user and execute bashrc file.
   $ exec bash.
   $ source .bashrc
   $ hadoop –version
8. Open the 'hadoop-env.sh' file and add add java home dir or java folder path gedit hadoop-env.sh (Hadoop_env.sh -> right click and open gedit text editor.)
   JAVA_HOME = java.path.
9. Copy and Paste the following file to hadoop folder-->etc-->hadoop

Open vim core-site.xml

```
<configuration>
<property>
<name>fs.default.name</name>
<value>hdfs://localhost:9000</value>
</property>
</configuration>
```

Open vim mapred-site.xml

```
<configuration>
<property>
  <name>mapreduce.framework.name</name>
  <value>yarn</value>
</property>
<property>
```

```
<name>mapreduce.job.tracker</name>
<value>localhost:54311</value>
</property>
<property>
<name>mapreduce.tasktracker.map.tasks.maximum</name>
<value>4</value>
</property>
<property>
<name>mapreduce.map.tasks</name>
<value>4</value>
</property>
</configuration>
```

Open vim hdfs-site.xml // to edit the username in this file

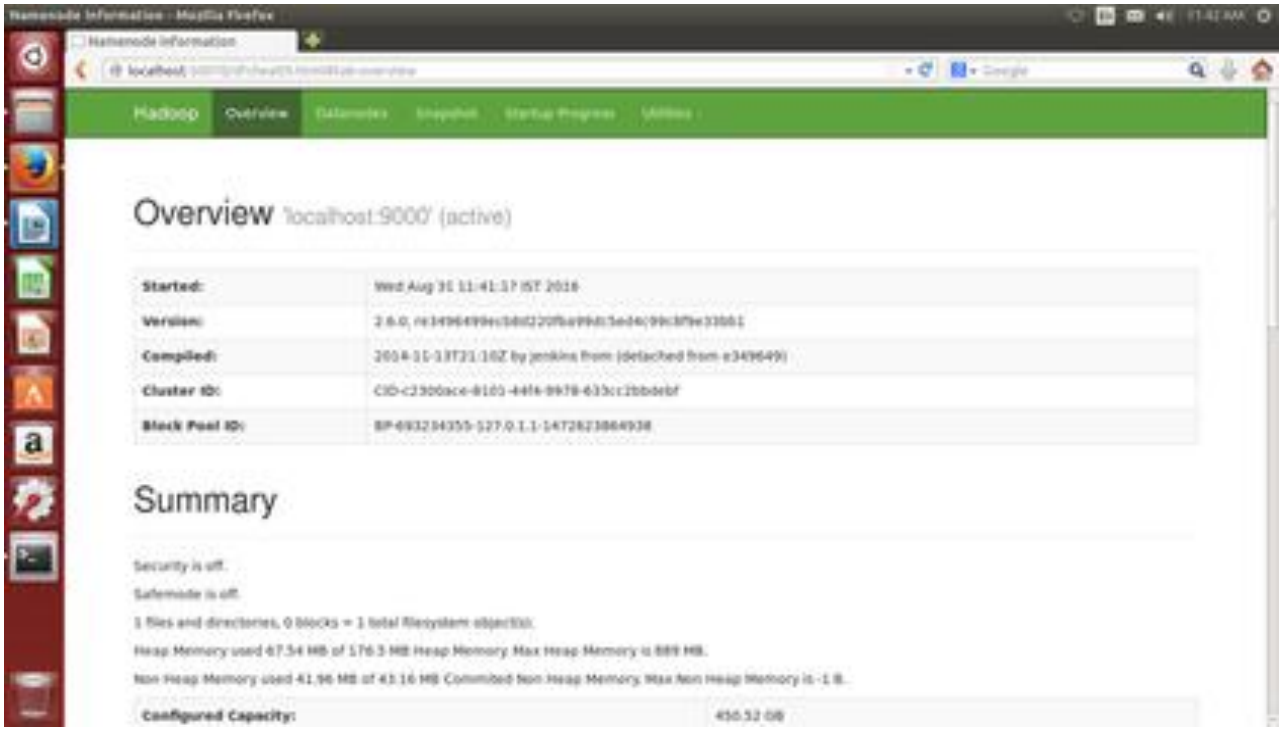
```
<configuration>
<property>
  <name>dfs.replication</name>
  <value>3</value>
</property>

<property>
  <name>dfs.namenode.name.dir</name>
  <value>file:/home/hduser/hdfs/namenode</value>
</property>

<property>
  <name>dfs.datanode.data.dir</name>
  <value>file:/home/hduser/hdfs/datanode</value>
</property>
</configuration>
```

10. Key generation(ssh key) it has 3 commands
    Ssh -keygen –t rsa –p –f ~ /.ssh/id_rsa.
    Cot ~/.ssh / id_rsa.pub >>~/.ssh/authorised_keys
    Ssh localhost (it will ask questions) like (yes/no) gives yes
    Enter password : hadoop
11. Format the hadoop name node
    Go to hadoop user login
    $hadoop > hdfs namenode –format.
12. Start hadoop
    Start all .sh (or) Hadoop – 3.0.3/sbin/start_all.sh
13. Check the nodes that are credited or not
    $ jps.

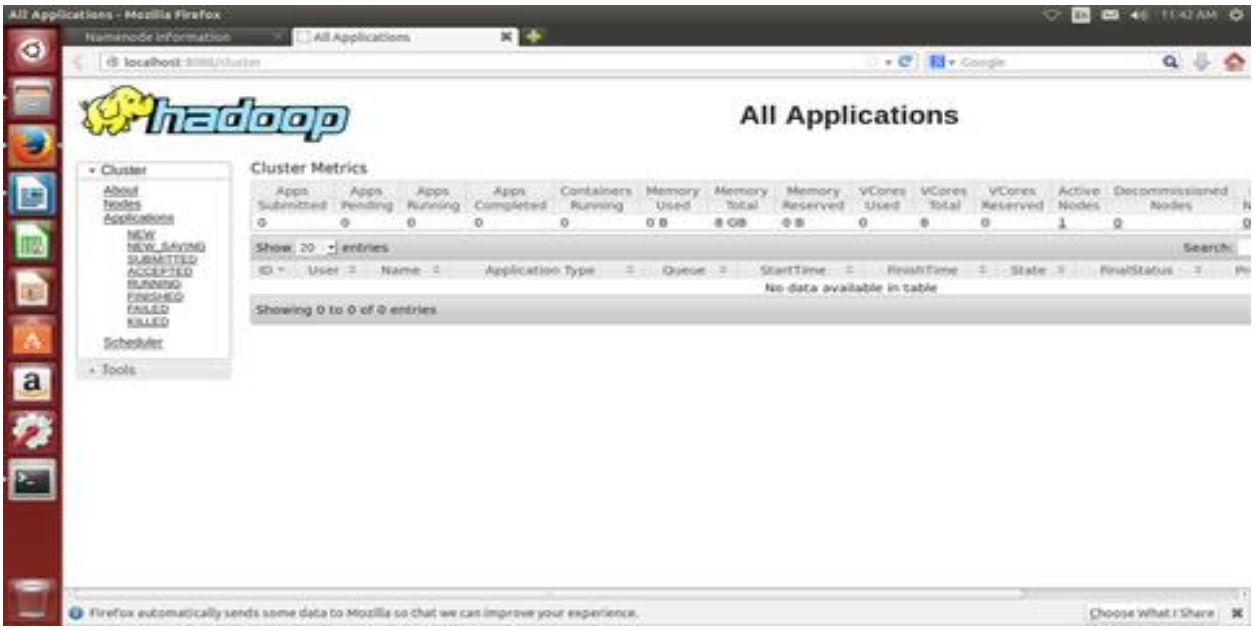
If namenode is created -> go the localhost Open the namenode and datanode.
In browser type the following port number
localhost:50070
localhost:8088

If the namenode is not created execute the below command and repeat steps 11 and 12.
rm –r hdfs/

Output:
NameNode:



DataNode:



Result:

Thus the procedure to set up the one node Hadoop cluster has been developed