

EXP NO 1: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION AND PROVIDE IT AS A SERVICE USING ANY CLOUD SERVICE PROVIDER TODEMONSTRATE SOFTWARE AS A SERVICE (SAAS).

The screenshot shows the 'Book a Cab' form in the Patel Cars application. The form is titled 'Book a Cab' and is located on the right side of the application interface. The left sidebar contains the 'PATEL CARS' logo and navigation links: 'Cab Booking', 'Book a Cab', and 'Bookings'. The form fields are as follows:

- Name\*: A text input field with a placeholder 'First Name' and 'Last Name'.
- Employee ID\*: A text input field.
- Email Id\*: A text input field.
- Mobile Number\*: A text input field with a dropdown for country code (+91) and a value (85234 56789).
- Gender\*: Radio buttons for 'Male' and 'Female'.
- Booking Date\*: A date input field with the value '25-Jul-2024'.
- Travel Date\*: A date input field with the placeholder 'dd-MM-yyyy'.
- Pickup Time\*: A dropdown menu with the value 'Select'.
- Pickup Address\*: A text input field with the placeholder 'Address Line 1'.

The application interface also shows a 'Trial expires in 7 days' message and a 'Upgrade' button.

The screenshot shows the 'Bookings' table in the Patel Cars application. The table is titled 'Bookings' and is located on the right side of the application interface. The left sidebar contains the 'PATEL CARS' logo and navigation links: 'Cab Booking', 'Book a Cab', and 'Bookings'. The table has the following columns:

- Name
- Employee ID
- Email Id
- Mobile Number
- Gender
- Booking Date
- Pickup Time

The table contains one row of data:

Name	Employee ID	Email Id	Mobile Number	Gender	Booking Date	Pickup Time
Dhruv Patel	192224169	dhruvpatel@gmail.com	+919666817631	Male	25-Jul-2024	Time 1

The application interface also shows a 'Trial expires in 7 days' message and a 'Upgrade' button. At the bottom of the table, it says 'Showing 1 of 1'.

EXP NO 2: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION FOR FLIGHT RESERVATION SYSTEM USING ANY CLOUD SERVICE PROVIDER TO DEMONSTRATE SAAS.

The screenshot shows a web application interface for a flight reservation system. The browser address bar displays the URL: `creatorapp.zoho.in/vivekg0286.sse_saveetha/vivek#Form:flight_reservation_system`. The application header includes the user name 'vivek' and a sidebar with navigation options: 'Flight Reservation Sy...', 'flight reservation syst...', and 'All Flight Reservation...'. The main form area is titled 'flight reservation system' and contains the following fields:

- Name: Two input fields for 'First Name' and 'Last Name'.
- Phone: An input field with a dropdown for country code (set to '+91') and a value '81234 56789'.
- Address: Two input fields for 'Address Line 1' and 'Address Line 2'.
- City / District: An input field.
- State / Province: A dropdown menu.
- Postal Code: An input field.
- Country: A dropdown menu.
- Date: An input field with a date picker showing '00-00/00-0000'.
- Time: An input field with a time picker showing 'HH:mm:ss'.
- Email: An input field.

The screenshot shows the 'All Flight Reservation Systems' table in the web application. The browser address bar displays the URL: `creatorapp.zoho.in/vivekg0286.sse_saveetha/vivek#Report:All_Flight_Reservation_Systems`. The application header and sidebar are the same as in the previous screenshot. The table has the following columns: Name, Phone, Address, Date, Time, and Email. The table contains two rows of data:

Name	Phone	Address	Date	Time	Email
Dhruv Patel	+919566666033	desh apartment, urapakkam, chennai, Tamil nadu, 603210, India	17-Jul-2024	14:01:15	@hruvishorpatel
Dhruv					

Showing 2 of 2

EXP NO 3: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION FOR PROPERTY BUYING & RENTAL PROCESS (IN CHENNAI CITY) USING ANY CLOUD SERVICE PROVIDER TO DEMONSTRATE SAAS.

The screenshot shows a web browser with the URL `creatorapp.zoho.in/vivekg0286.sse_saveetha/buying-and-rental#Form.buying_and_renting`. The application has a dark sidebar with the title 'buying and rental' and a menu with 'buying and renting' (selected), 'buying and renting R...', and 'properties'. The main content area is titled 'buying and renting' and contains a form with the following fields:

- Name:** Two input fields for 'First Name' and 'Last Name'.
- Phone:** A dropdown for country code (set to '+91') and an input field for the phone number (set to '81234 56789').
- area:** A dropdown menu currently showing '-Select-'.
- details of contract \*:** An input field containing 'https://'. A red asterisk indicates this is a required field.
- Radio:** Three radio button options: '10000-20000', '15000-21000', and '20000-above'.

At the bottom of the form are 'Submit' and 'Reset' buttons. The top right of the application shows 'Trial expires in 15 days', 'Upgrade', 'Edit this application', and 'Help' links.

The screenshot shows the 'buying and renting Report' page. The URL is `creatorapp.zoho.in/vivekg0286.sse_saveetha/buying-and-rental#Report.buying_and_renting_Report`. The sidebar is the same as the previous screenshot. The main content area is titled 'buying and renting Report' and features a table with the following data:

Name	Phone	area	details of contract	Radio
vivek gavanuthala	+919666817631	chembarbakam	rent, DOCUMENT	10000-20000

Below the table, it says 'Showing 1 of 1'. The top right of the application shows 'Trial expires in 15 days', 'Upgrade', 'Edit this application', and 'Help' links.

EXP NO 4: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION FOR CAR BOOKING RESERVATION SYSTEM USING ANY CLOUD SERVICE PROVIDER TO DEMONSTRATE SAAS.

The screenshot shows the 'Book a Cab' form in the Patel Cars application. The form is located at the URL [creatorapp.zoho.in/vivekg0286.sse\\_saveetha/patel-cars#Form:Book\\_a\\_Cab](https://creatorapp.zoho.in/vivekg0286.sse_saveetha/patel-cars#Form:Book_a_Cab). The form fields are as follows:

- Name\*: Two input fields for First Name and Last Name.
- Employee ID\*: A single input field.
- Email Id\*: A single input field.
- Mobile Number\*: A dropdown menu for country code (set to +91) and a text input for the number (85234 56789).
- Gender\*: Radio buttons for Male and Female.
- Booking Date\*: A date picker set to 25-Jul-2024.
- Travel Date\*: A text input with a date format mask dd-MM-yyyy.
- Pickup Time\*: A dropdown menu set to Select.
- Pickup Address\*: A text input with a placeholder Address Line 1.

The application interface includes a sidebar with 'Cab Booking' and 'Bookings' options, and a top bar with 'PATEL CARS' and a trial expiration notice.

The screenshot shows the 'Bookings' table in the Patel Cars application. The table is located at the URL [creatorapp.zoho.in/vivekg0286.sse\\_saveetha/patel-cars#Report:Bookings](https://creatorapp.zoho.in/vivekg0286.sse_saveetha/patel-cars#Report:Bookings). The table has the following columns: Name, Employee ID, Email Id, Mobile Number, Gender, Booking Date, and Pickup Time. The table contains one row of data for a booking on 25-Jul-2024.

Name	Employee ID	Email Id	Mobile Number	Gender	Booking Date	Pickup Time
Dhruv Patel	192224169	dhruvpatel@gmail.com	+919666817631	Male	25-Jul-2024	Time 1

The application interface includes a sidebar with 'Cab Booking' and 'Bookings' options, and a top bar with 'PATEL CARS' and a trial expiration notice.

## EXP NO 5: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION FOR LIBRARY BOOK RESERVATION SYSTEM FOR SIMATS LIBRARY USING ANY CLOUD SERVICE PROVIDER TO DEMONSTRATE SAAS

Simats Library

LIBRARY

Student Name:

Reg No:

Student Contact no:

Book Name:

Book No:

Department:

Issued Date:

Returned Date:

Simats Library

All Libraries

Student Name	Reg No	Book Name	Book No	Department	Issued Date	Student Contact no
Ganda Murtaz	192022049	Geronimo Stilton	18867	Bio-Tec	25-Jul-2024	+919441193688

Showing 1 of 1

EXP NO 6: CREATE A SIMPLE CLOUD SOFTWARE APPLICATION FOR PRODUCT SELLING USING ANY CLOUD SERVICE PROVIDER TO DEMONSTRATE SAAS.

The screenshot shows the 'Cloud' form in the DV Clouds application. The form is titled 'Cloud' and contains the following fields:

- User Name: Two input fields for First Name and Last Name.
- User Ph no: A dropdown for country code (India) and a text input for the phone number (81234 56789).
- User Email: A text input field.
- PAY: A text input field with a placeholder '00.00.000.000'.
- Purchase Date: A date picker showing 'Jul-2024'.
- Purchase Time: A time picker showing '13:00:00'.
- Valid upto: A text input field with a placeholder '00000000'.
- Threats: A text input field with a placeholder 'First Name'.

At the bottom of the form are 'Submit' and 'Reset' buttons. The application header shows 'DV Clouds' and a sidebar with 'Clouds', 'Cloud', and 'All Clouds' options. The bottom status bar shows 'vivekg0286.sse'.

The screenshot shows the 'All Clouds' table in the DV Clouds application. The table has the following columns:

- User Name
- User Ph no
- User Email
- Purchase ...
- Purchase T...
- Threats
- Valid u...

The table contains one row of data:

User Name	User Ph no	User Email	Purchase ...	Purchase T...	Threats	Valid u...
Ganda Muntaz	+919441193688	gandoprasthakar037@gmail.com	25-Jul-2024	13:00:05	Use carefully	2026

At the bottom of the table, it says 'Showing 1 of 1'. The application header shows 'DV Clouds' and a sidebar with 'Clouds', 'Cloud', and 'All Clouds' options. The bottom status bar shows 'vivekg0286.sse'.

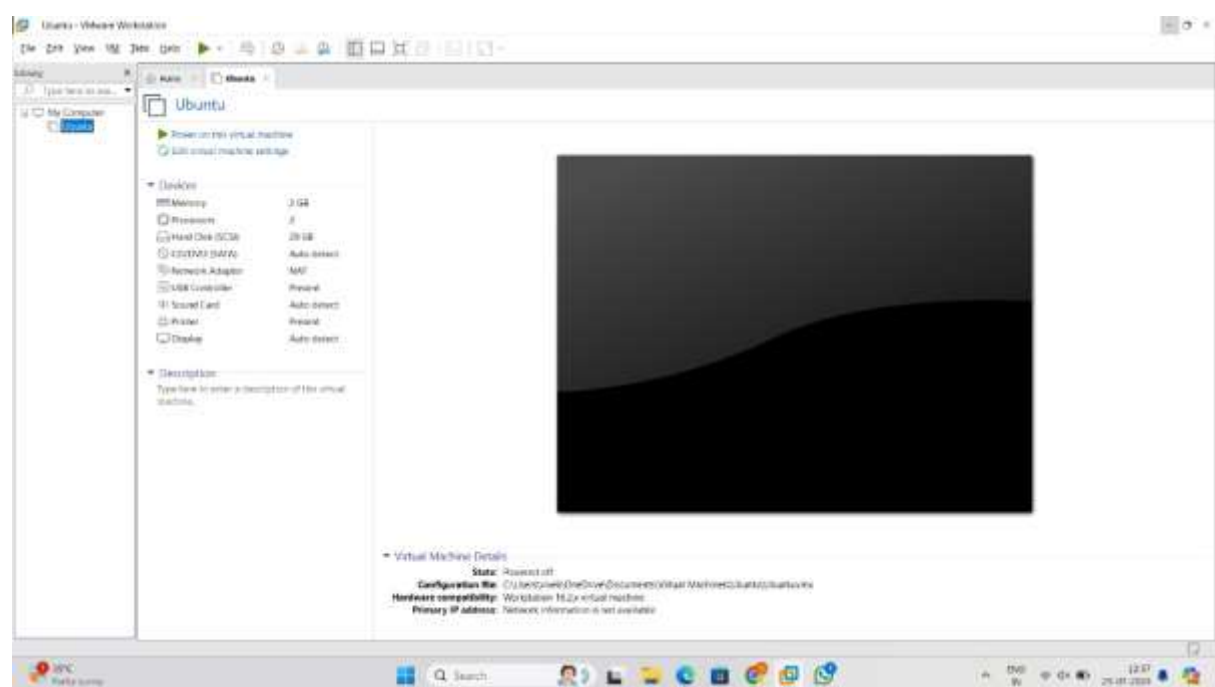
The screenshot shows a Kali Linux virtual machine environment. The terminal window displays the following output from the 'ifconfig' command:

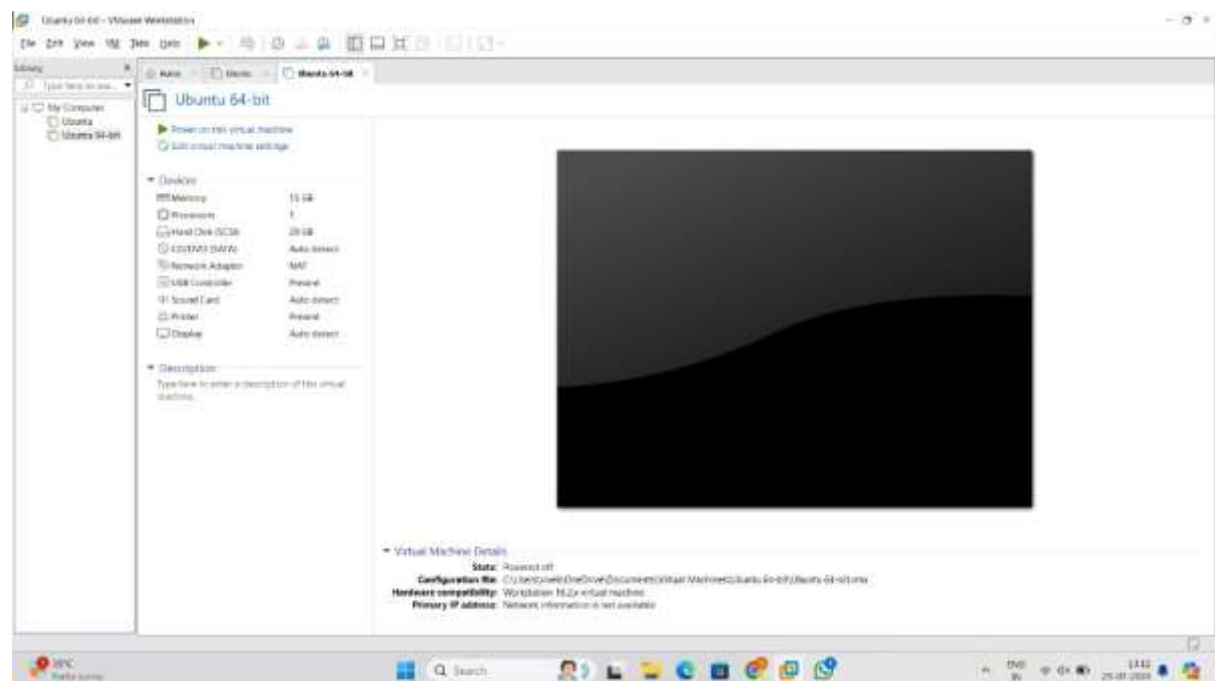
```

eth0: flags=4163<UP,BROADCAST,MULTICAST>  mtu=1500
        inet 10.0.2.15 netmask=255.255.255.0  hwaddr=08:00:27:00:00:15
        inet6 ::1 fe80::209:1ff:fe00:0000  prefixlen=64  scopeid=0x20::>
        ether 08:00:27:00:00:15  txqueuelen=1000  (Ethernet)
        RX packets=211  bytes=14200 (13.8 KiB)  rxerrors=0  overruns=0  on-c>
        TX packets=10  bytes=1088 (1.0 KiB)  txerrors=0  dropped=0  overru>
        carrier=0  collisions=0  lcserrors=0  frameerrors=0
        rx-frames=0  tx-frames=0
        RX: 0 bytes 0 packets received by device
        TX: 0 bytes 0 packets transmitted by device, 0 errors
        RX-frames: 0  TX-frames: 0
        RX errors: 0  TX errors: 0  overruns: 0  on-c>

wlan0: flags=4096<UP,BROADCAST>  mtu=1500
        inet 10.0.2.16 netmask=255.255.255.0  hwaddr=08:00:27:00:00:16
        inet6 ::1 fe80::209:1ff:fe00:0000  prefixlen=64  scopeid=0x20::>
        ether 08:00:27:00:00:16  txqueuelen=1000  (Ethernet)
        RX packets=0  bytes=0 (0.0 KiB)  rxerrors=0  overruns=0  on-c>
        TX packets=0  bytes=0 (0.0 KiB)  txerrors=0  dropped=0  overru>
        carrier=0  collisions=0  lcserrors=0  frameerrors=0
        rx-frames=0  tx-frames=0
        RX: 0 bytes 0 packets received by device
        TX: 0 bytes 0 packets transmitted by device, 0 errors
        RX-frames: 0  TX-frames: 0
        RX errors: 0  TX errors: 0  overruns: 0  on-c>
  
```

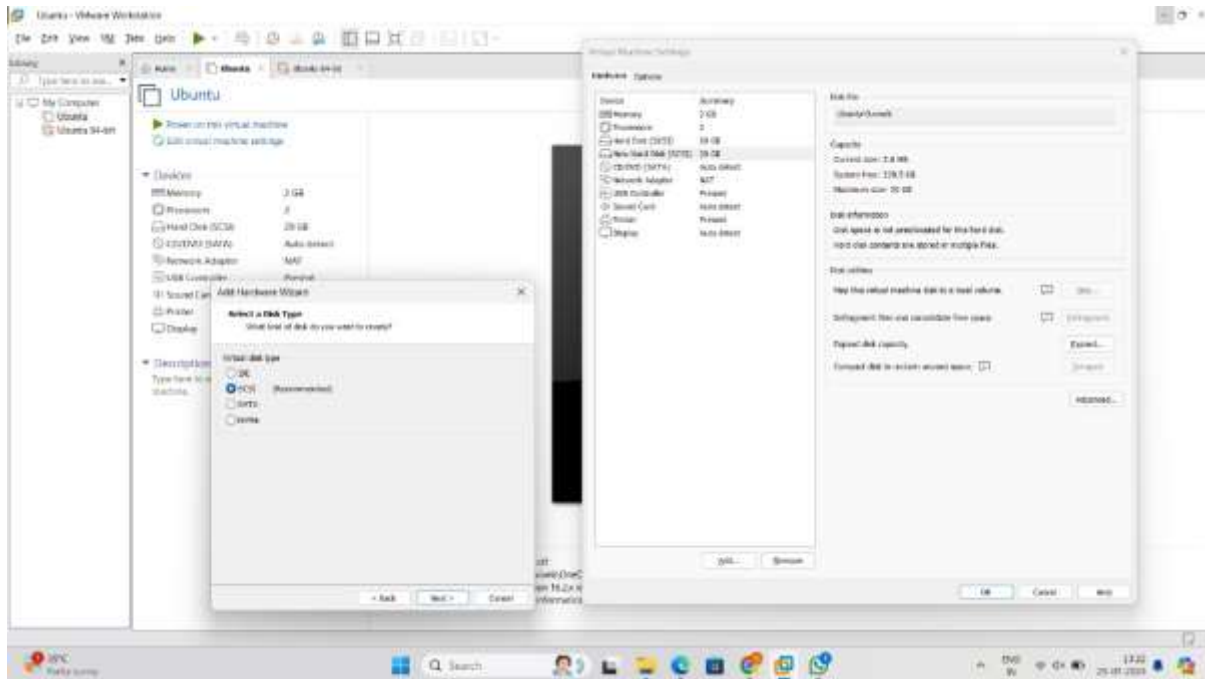
The host's taskbar at the bottom shows the date as 25-01-2020 and the time as 11:58.



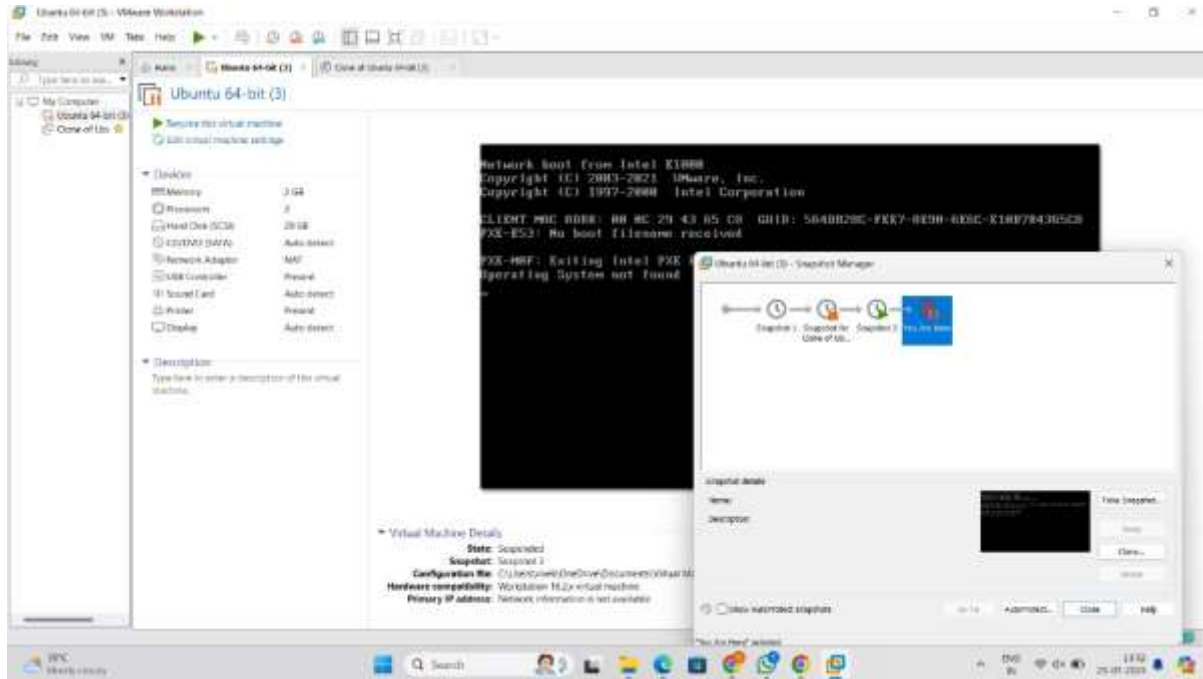




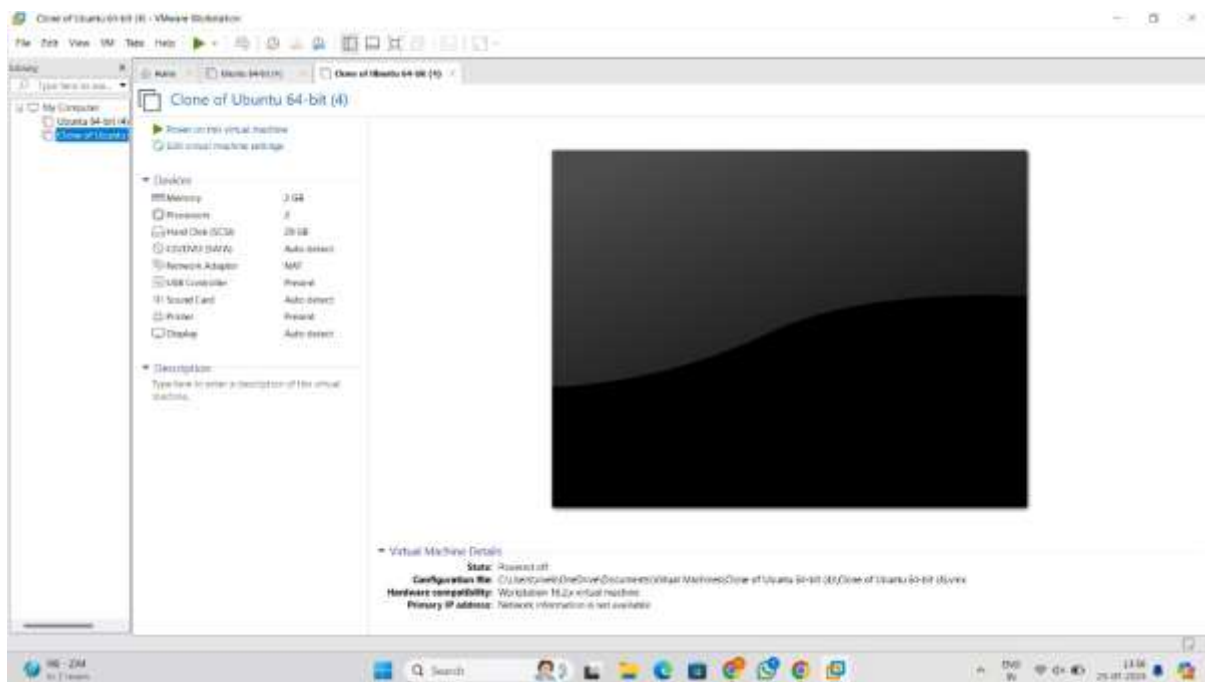
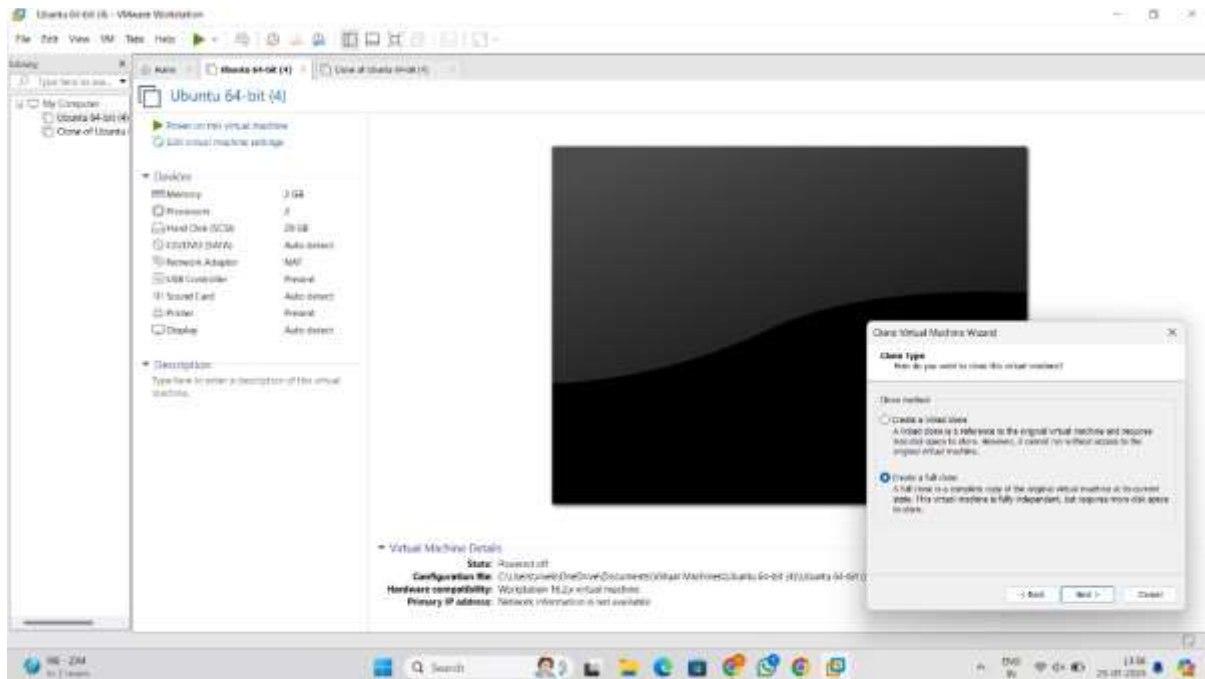
## EXP 9: CREATE A VIRTUAL HARD DISK AND ALLOCATE THE STORAGE USING VM WARE WORKSTATION.



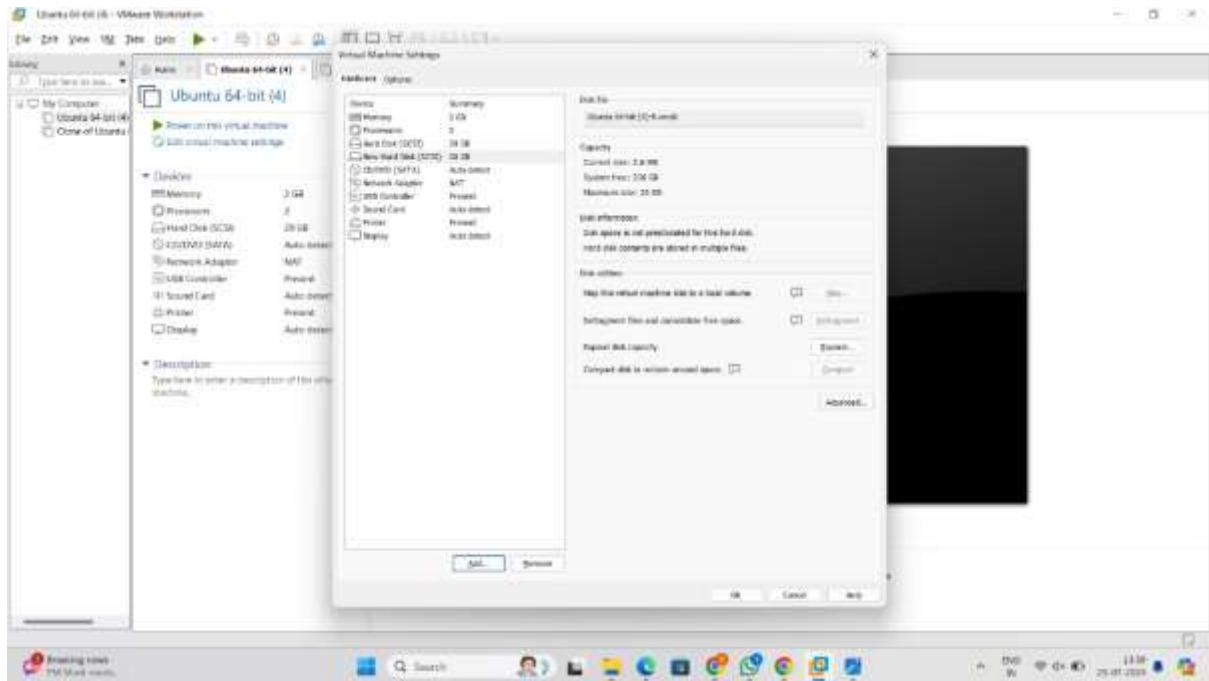
## EXPNO 10: CREATE A SNAPSHOT OF A VM AND TEST IT BY LOADING THE PREVIOUS VERSION/CLONED VM



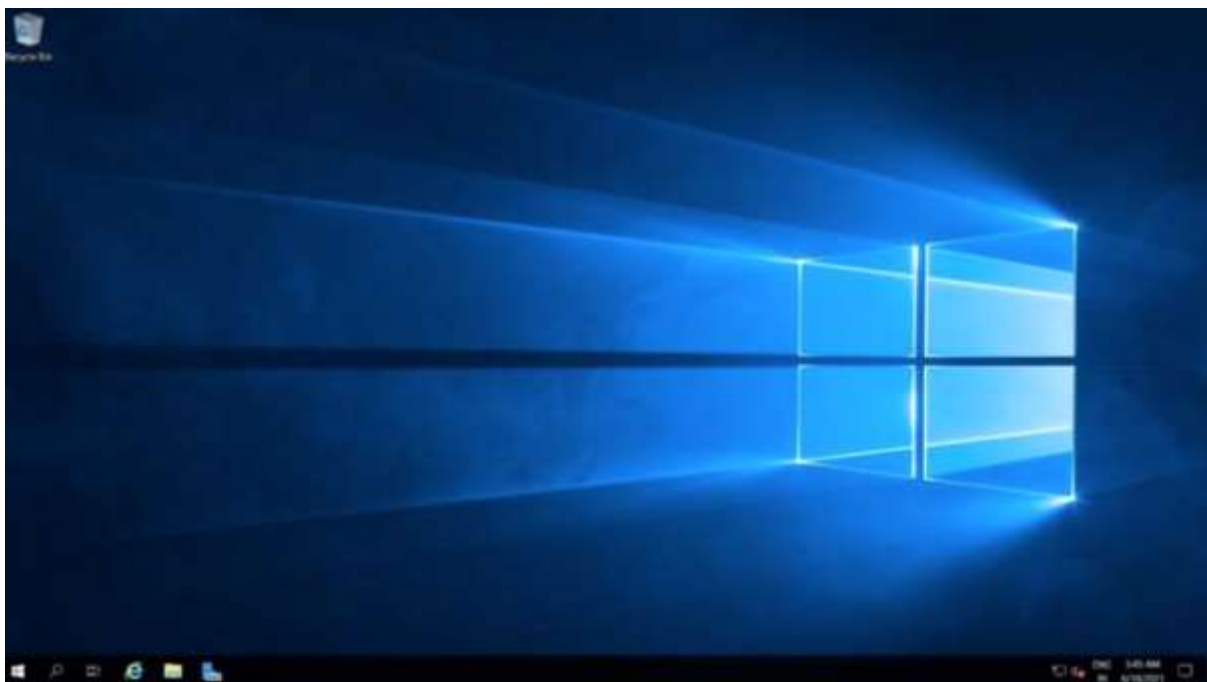
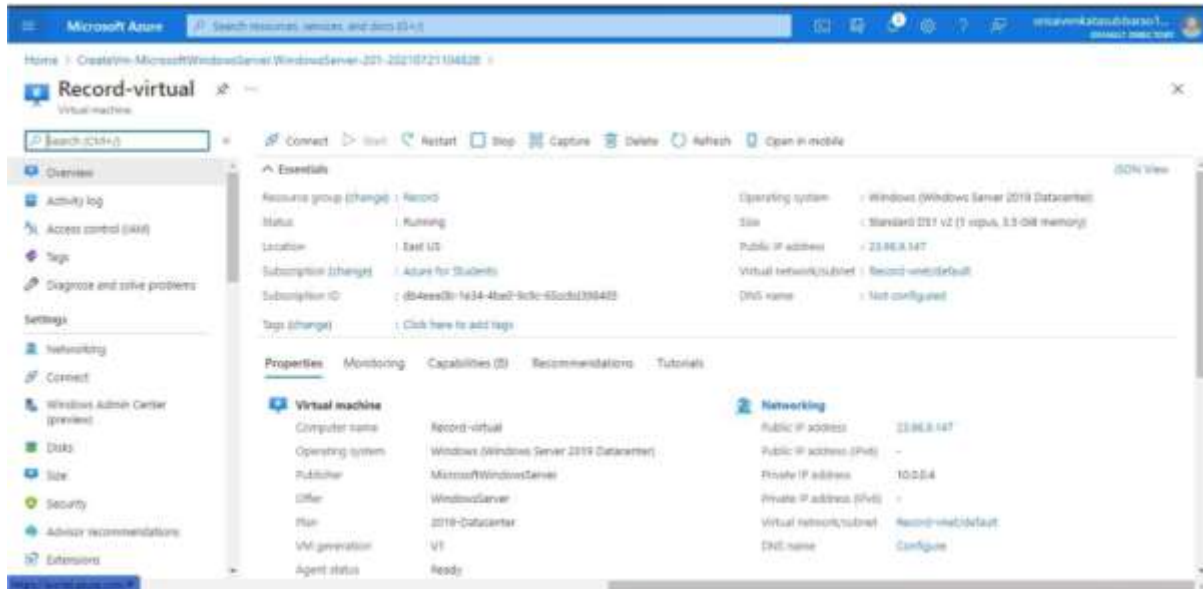
## EXPNO 11: CREATE A CLONING OF A VM AND TEST IT BY LOADING THE PREVIOUS VERSION/CLONED VM.



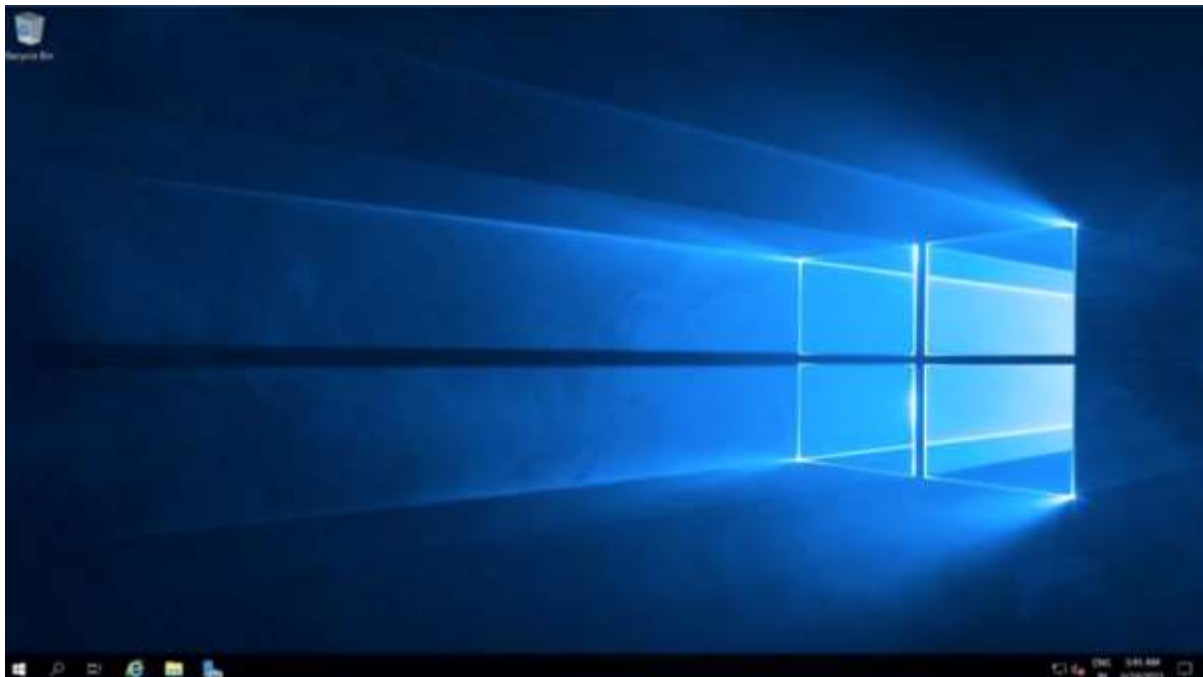
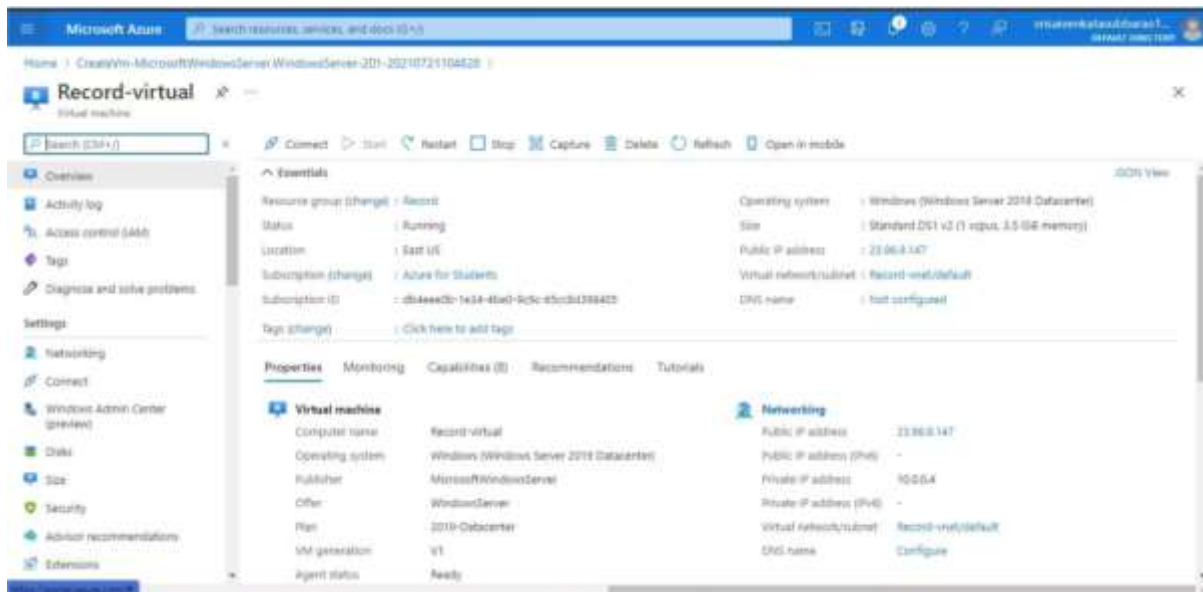
## EXP 12: CHANGE HARDWARE COMPATIBILITY OF A VM (EITHER BY CLONE/CREATE NEW ONE) WHICH IS ALREADY CREATED AND CONFIGURED.



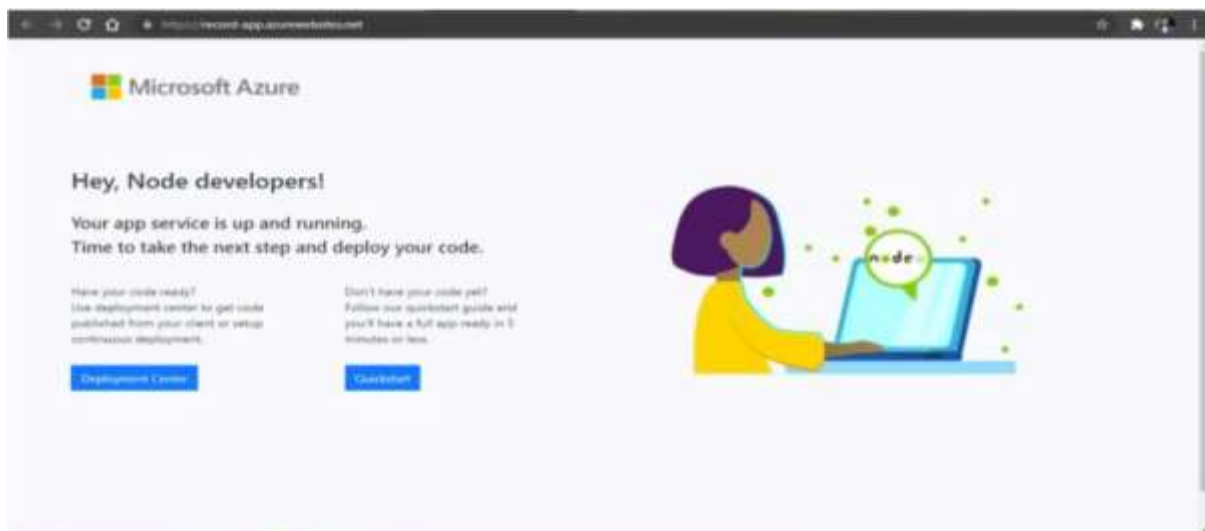
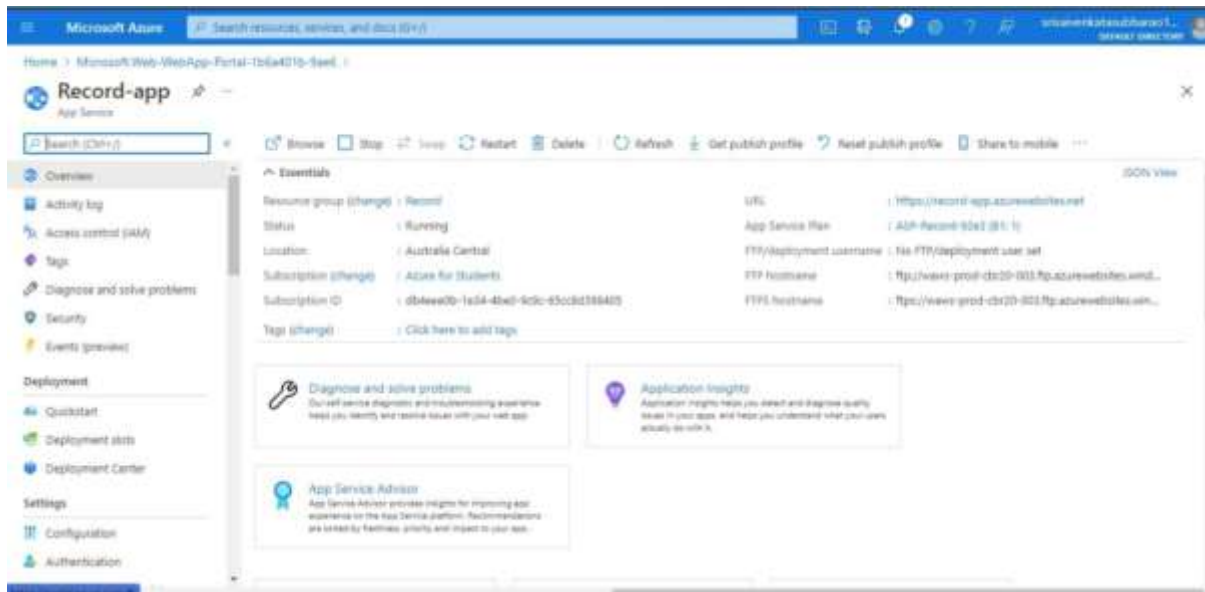
EXP13. DEMONSTRATE INFRASTRUCTURE AS A SERVICE (IAAS) BY CREATING A VIRTUAL MACHINE USING A PUBLIC CLOUD SERVICE PROVIDER (AZURE), CONFIGURE WITH REQUIRED MEMORY AND CPU.



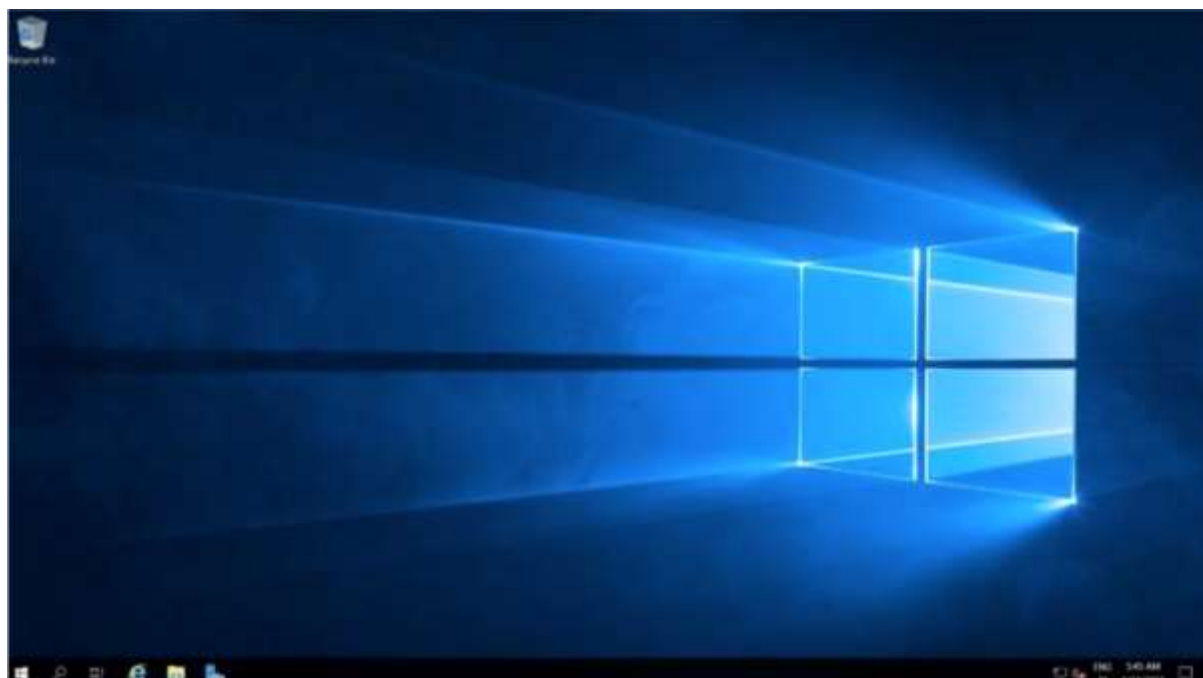
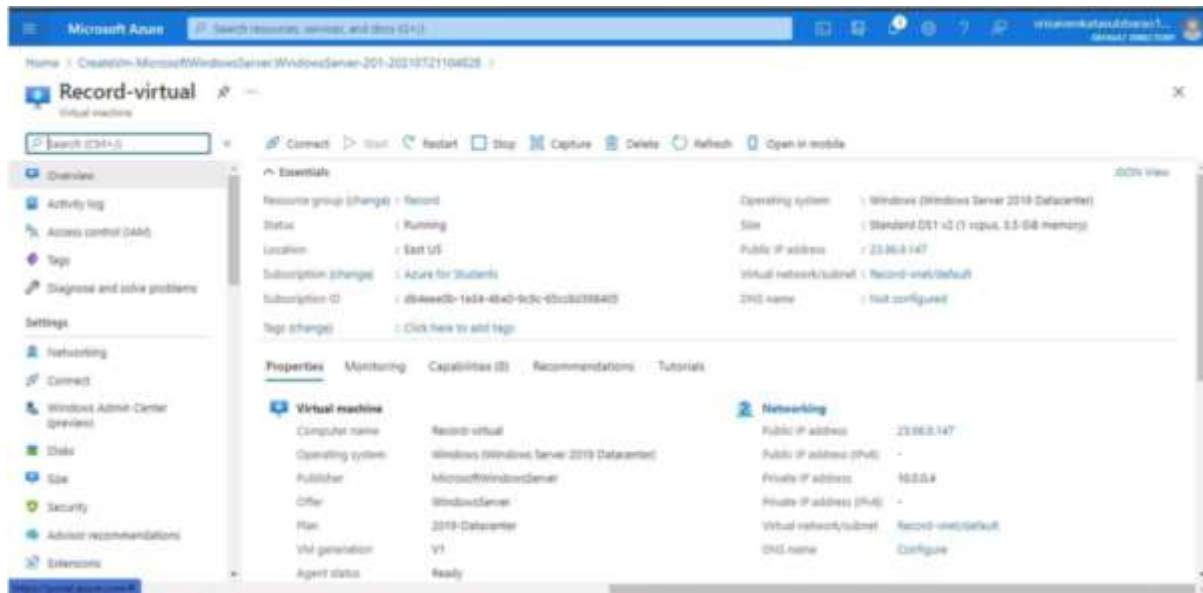
EXP 14 .DEMONSTRATE INFRASTRUCTURE AS A SERVICE(IAAS) BY CREATING AVIRTUAL MACHINE USING A PUBLIC CLOUD SERVICE PROVIDER(AZURE/GCP/AWS) CONFIGURE WITH MINIMUM CPU, RAM ANDSTORAGE AND LAUNCH THE VM IMAGE.



EXP15.CREATE A SIMPLE WEB SITE USING ANY PUBLIC CLOUD SERVICE PROVIDER (AZURE/GCP/AWS) AND CHECK THE PUBLIC ACCESSIBILITY OFTHE STORED FILE TO DEMONSTRATE STORAGE AS A SERVICE

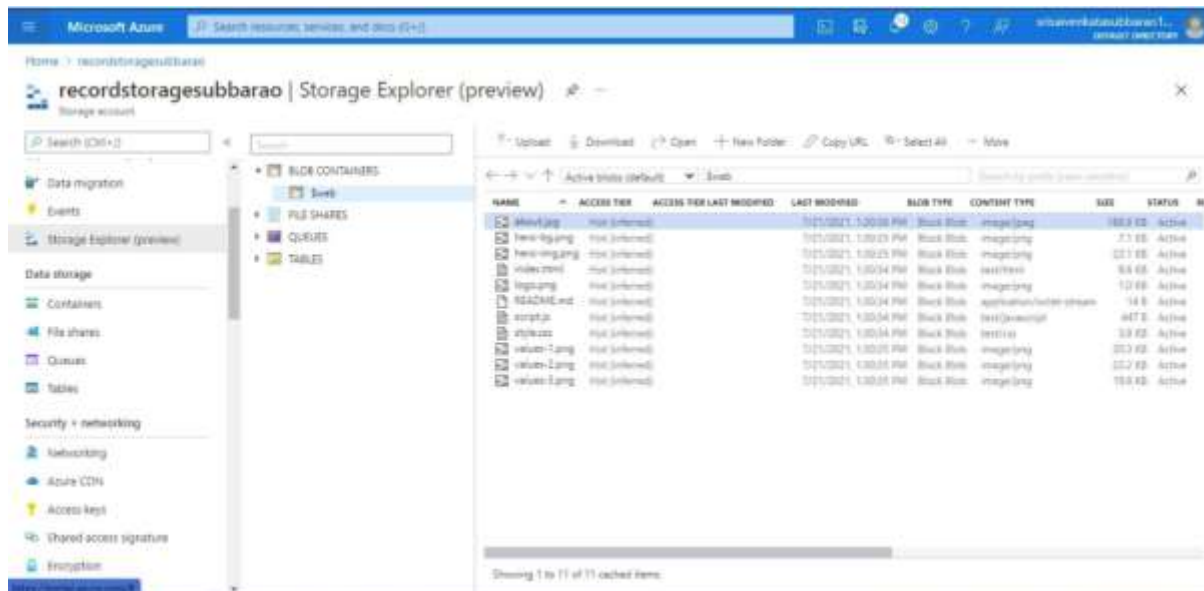


EXP 16.DEMONSTRATE INFRASTRUCTURE AS A SERVICE(IAAS) BY CREATING AVIRTUAL MACHINE USING A PUBLIC CLOUD SERVICE PROVIDER(AZURE/GCP/AWS) CONFIGURE WITH MINIMUM CPU, RAM ANDSTORAGE AND LAUNCH THE VM IMAGE.

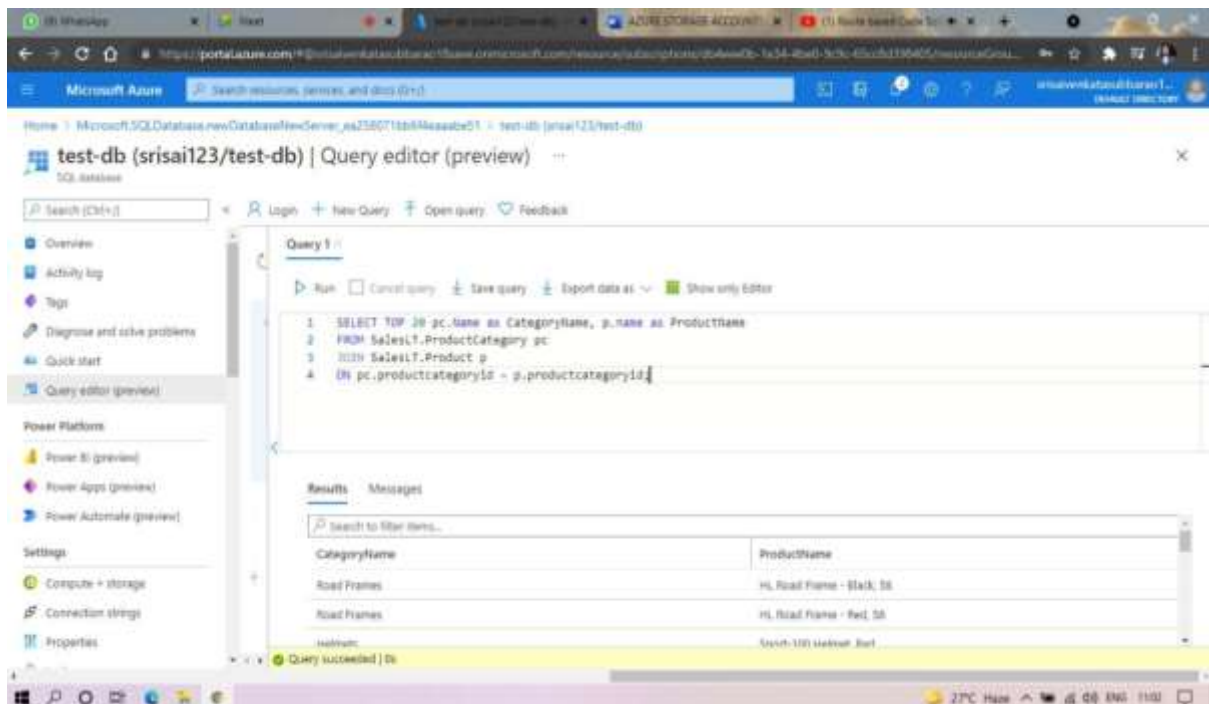
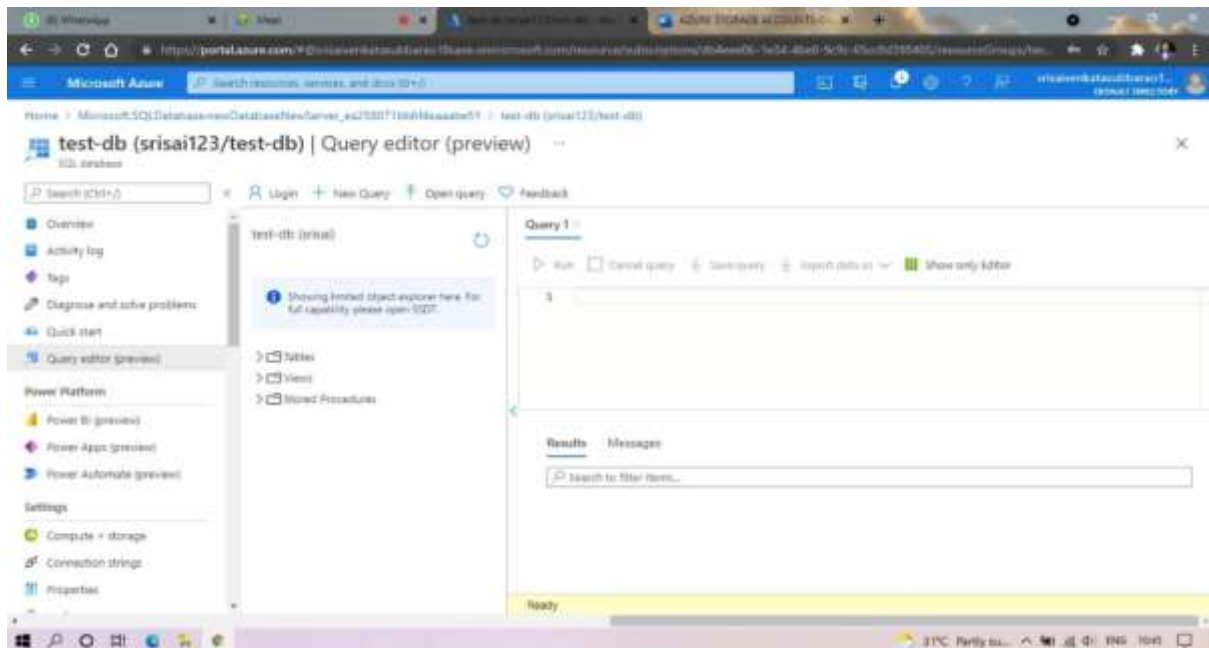




EXP17.CREATE A STORAGE SERVICE USING ANY PUBLIC CLOUD SERVICE PROVIDER (AZURE/GCP/AWS) AND CHECK THE PUBLIC ACCESSIBILITY OFTHE STORED FILE TO DEMONSTRATE STORAGE AS A SERVICE.



## EXP18.CREATE A SQL STORAGE SERVICE AND PERFORM A BASIC QUERY USINGANY PUBLIC CLOUD SERVICE PROVIDER (AZURE/GCP/AWS) TO DEMONSTRATE DATABASE AS A SERVICE

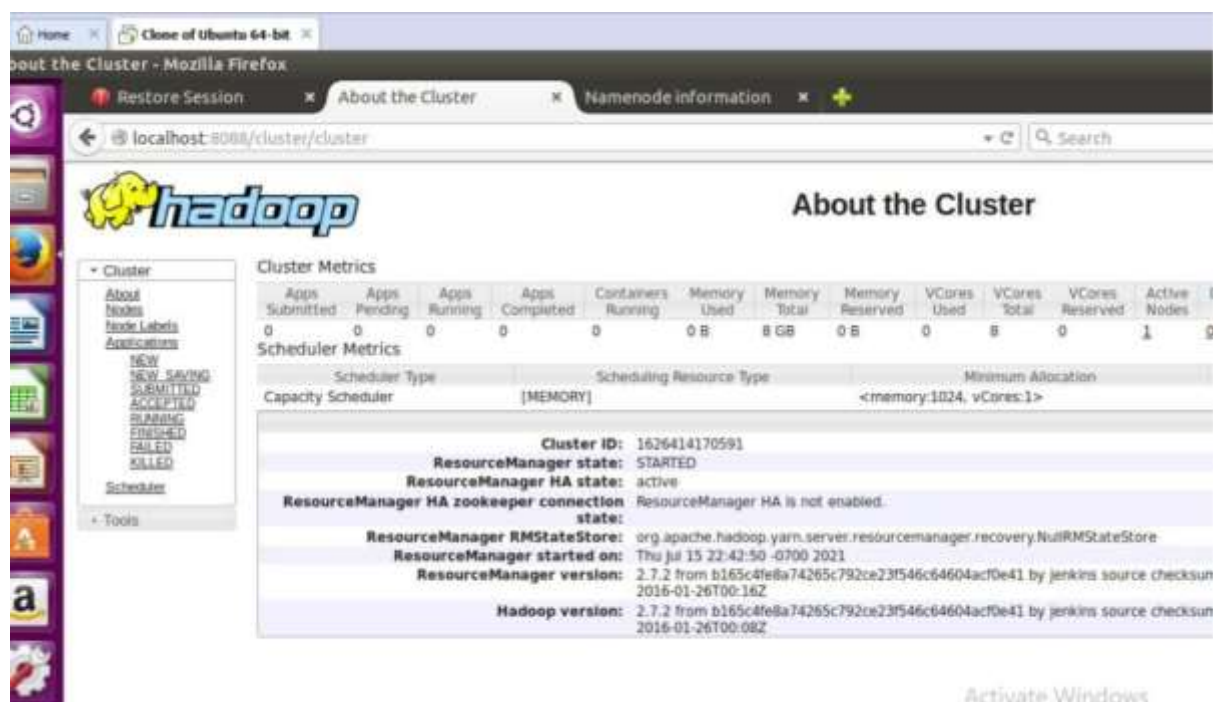


EXP. 19: PERFORM THE BASIC CONFIGURATION SETUP FOR INSTALLING HADOOP 2.X LIKE CREATING THE HDUSER AND SSH LOCALHOST

```
udhay@ubuntu:~$ su hduser
Password:
hduser@ubuntu:/home/udhay$ ssh-keygen -t rsa -P ""
Generating public/private rsa key pair.
Enter file in which to save the key (/home/hduser/.ssh/id_rsa):
/home/hduser/.ssh/id_rsa already exists.
Overwrite (y/n)? y
Your identification has been saved in /home/hduser/.ssh/id_rsa.
Your public key has been saved in /home/hduser/.ssh/id_rsa.pub.
The key fingerprint is:
09:0f:15:f2:b2:b7:5e:11:1a:6c:d3:2f:c3:09:02:15 hduser@ubuntu
The key's randomart image is:
+---[RSA 2048]---+
|      ..E.o.      |
|      . = .       |
|      = B o       |
|      O B +       |
|      . S * .     |
|      . . +       |
|      . .         |
|      . .         |
|      . .         |
|      . .         |
+---+-----+
hduser@ubuntu:/home/udhay$
hduser@ubuntu:/home/udhay$ cat $HOME/.ssh/id_rsa.pub >> $HOME/.ssh/authorized_keys
hduser@ubuntu:/home/udhay$ ssh localhost
Welcome to Ubuntu 15.04 (GNU/Linux 3.19.0-84-generic x86_64)

 * Documentation:  https://help.ubuntu.com/

Last login: Thu Jul 15 22:00:14 2021 from localhost
hduser@ubuntu:~$
```



The screenshot shows the Hadoop web interface in a Mozilla Firefox browser. The address bar displays 'localhost:8080/cluster/cluster'. The page title is 'About the Cluster'. The Hadoop logo is visible on the left. A sidebar on the left contains a 'Cluster' menu with options like 'About', 'Nodes', 'Nodes Labels', 'Applications', and 'Scheduler'. The main content area displays 'Cluster Metrics' and 'Scheduler Metrics'.

Apps Submitted	Apps Pending	Apps Running	Apps Completed	Containers Running	Memory Used	Memory Total	Memory Reserved	VCores Used	VCores Total	VCores Reserved	Active Nodes
0	0	0	0	0	0 B	8 GB	0 B	0	8	0	1

**Scheduler Metrics**

Scheduler Type	Scheduling Resource Type	Minimum Allocation
Capacity Scheduler	[MEMORY]	<memory:1024, vCores:1>

**Cluster ID:** 1626414170591

**ResourceManager state:** STARTED

**ResourceManager HA state:** active

**ResourceManager HA zookeeper connection state:** ResourceManager HA is not enabled.

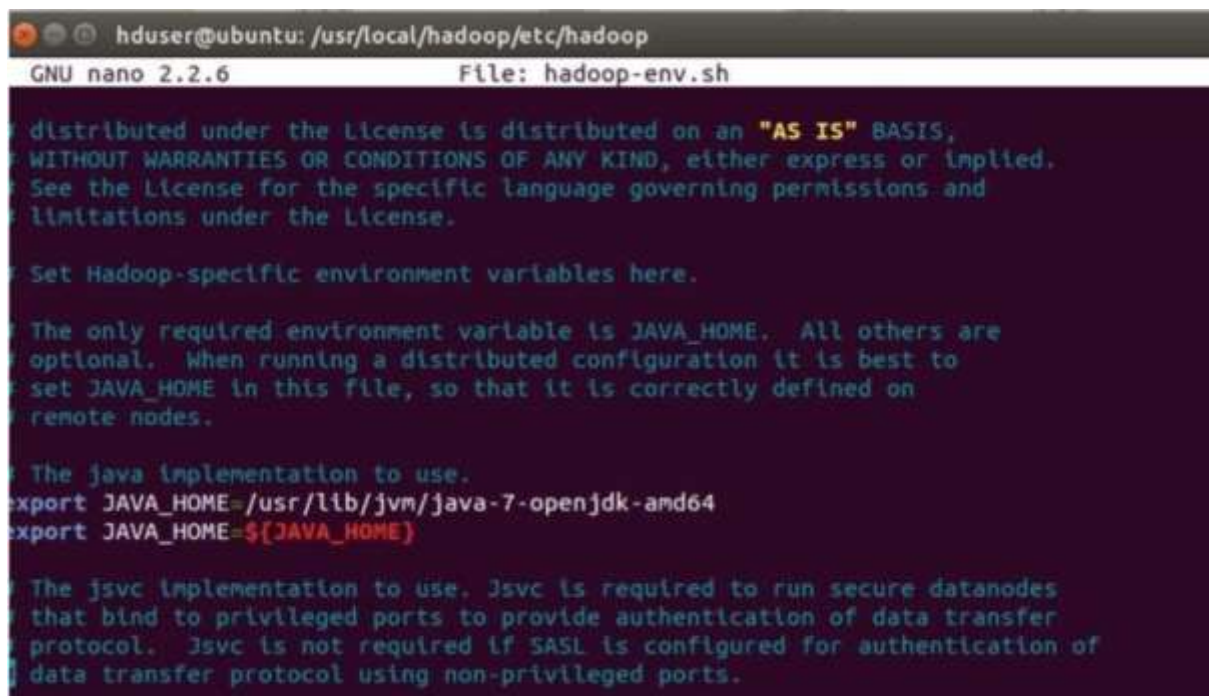
**ResourceManager RMStateStore:** org.apache.hadoop.yarn.server.resourcemanager.recovery.NullRMStateStore

**ResourceManager started on:** Thu Jul 15 22:42:50 -0700 2021

**ResourceManager version:** 2.7.2 from b165c4fe8a74265c792ce23f546c64604acf0e41 by jenkins source checksun 2016-01-26T00:16Z

**Hadoop version:** 2.7.2 from b165c4fe8a74265c792ce23f546c64604acf0e41 by jenkins source checksun 2016-01-26T00:08Z

## EXP. 20: INSTALL HADOOP 2.X AND CONFIGURE THE NAME NODE AND DATANODE.



```
hduser@ubuntu: /usr/local/hadoop/etc/hadoop
GNU nano 2.2.6 File: hadoop-env.sh

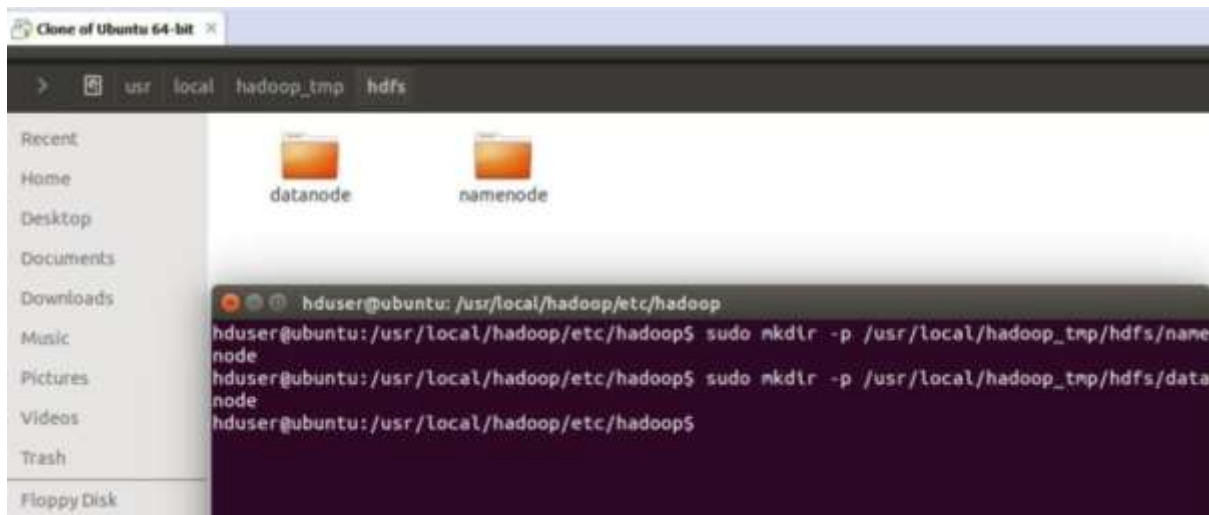
distributed under the license is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the license for the specific language governing permissions and
limitations under the license.

Set Hadoop-specific environment variables here.

The only required environment variable is JAVA_HOME. All others are
optional. When running a distributed configuration it is best to
set JAVA_HOME in this file, so that it is correctly defined on
remote nodes.

The java implementation to use. Jsvc is required to run secure datanodes
that bind to privileged ports to provide authentication of data transfer
protocol. Jsvc is not required if SASL is configured for authentication of
data transfer protocol using non-privileged ports.

export JAVA_HOME=/usr/lib/jvm/java-7-openjdk-amd64
export JAVA_HOME=${JAVA_HOME}
```



```
Clone of Ubuntu 64-bit X
> usr local hadoop_tmp hdfs
Recent
Home
Desktop
Documents
Downloads
Music
Pictures
Videos
Trash
Floppy Disk

datanode namenode

hduser@ubuntu: /usr/local/hadoop/etc/hadoop
hduser@ubuntu: /usr/local/hadoop/etc/hadoop$ sudo mkdir -p /usr/local/hadoop/tmp/hdfs/namenode
hduser@ubuntu: /usr/local/hadoop/etc/hadoop$ sudo mkdir -p /usr/local/hadoop/tmp/hdfs/datanode
hduser@ubuntu: /usr/local/hadoop/etc/hadoop$
```

EXP. 15: LAUNCH THE HADOOP 2.X AND PERFORM MAPREDUCE PROGRAMFOR A WORD COUNT PROBLEM

```
hadoop1@ubuntu-1:~/project$ hadoop fs -cat /output/wordcount4/part-r-00000
.      1
a      1
and    1
as     1
count  1
counts 1
file   2
for    1
input  1
is     1
job    1
job.   1
map    1
returns 1
sample 1
takes  1
```

Browsing HDFS - Mozilla Firefox

Browsing HDFS

localhost:50070/explorer.html#/output

Hadoop Overview Datanodes Snapshot Startup Progress Utilities

## Browse Directory

/output

Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name
-rw-r--r--	hduser	supergroup	0 B	8/11/2016, 9:54:38 PM	1	128 MB	<a href="#">_SUCCESS</a>
-rw-r--r--	hduser	supergroup	44 B	8/11/2016, 9:54:38 PM	1	128 MB	<a href="#">part-00000</a>