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Ex No: 1a)

INSTALLATION AND CONFIGURATION OF LINUX

Aim:

To install and configure Linux operating system in a Virtual Machine.
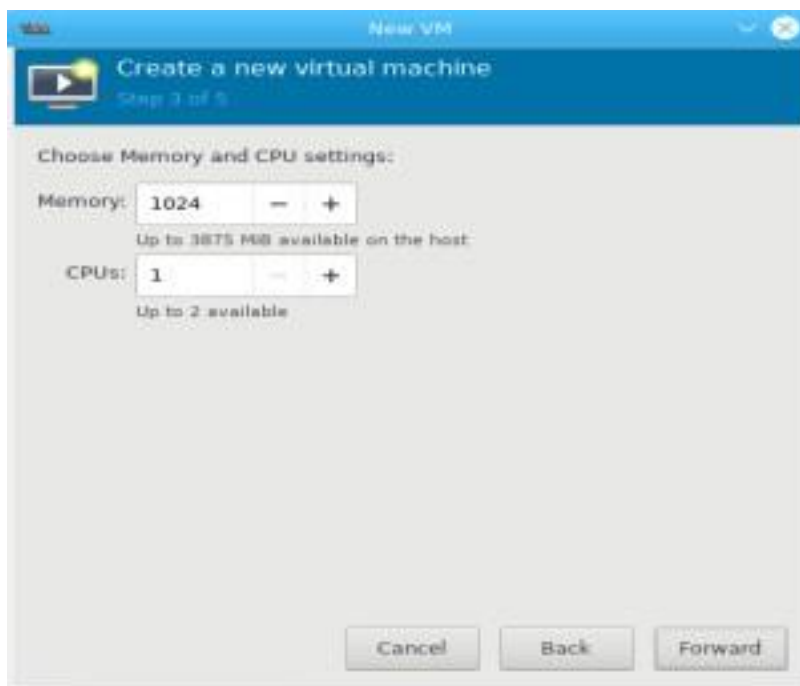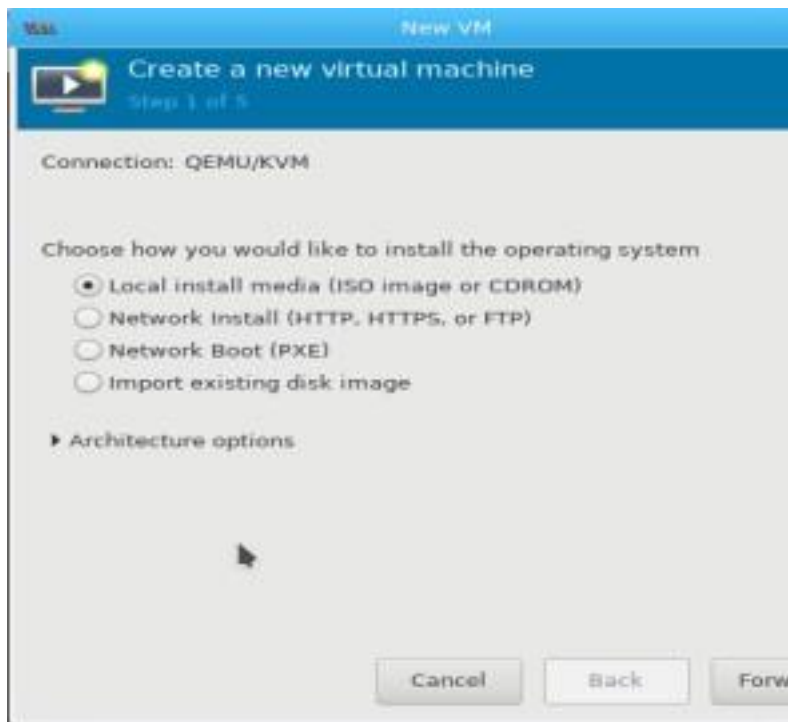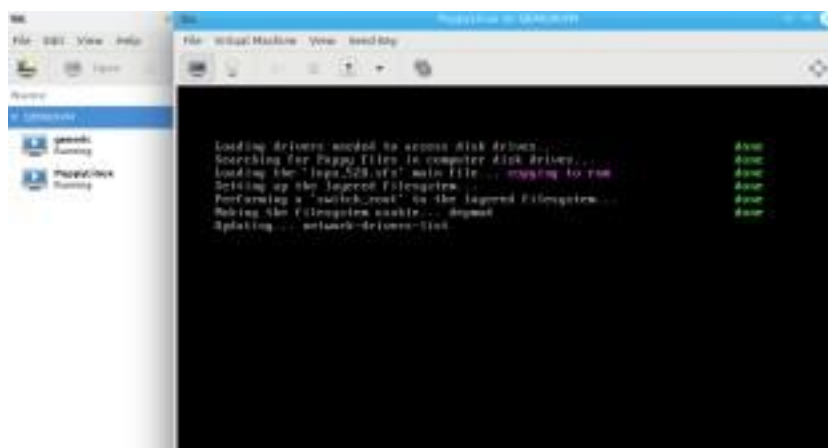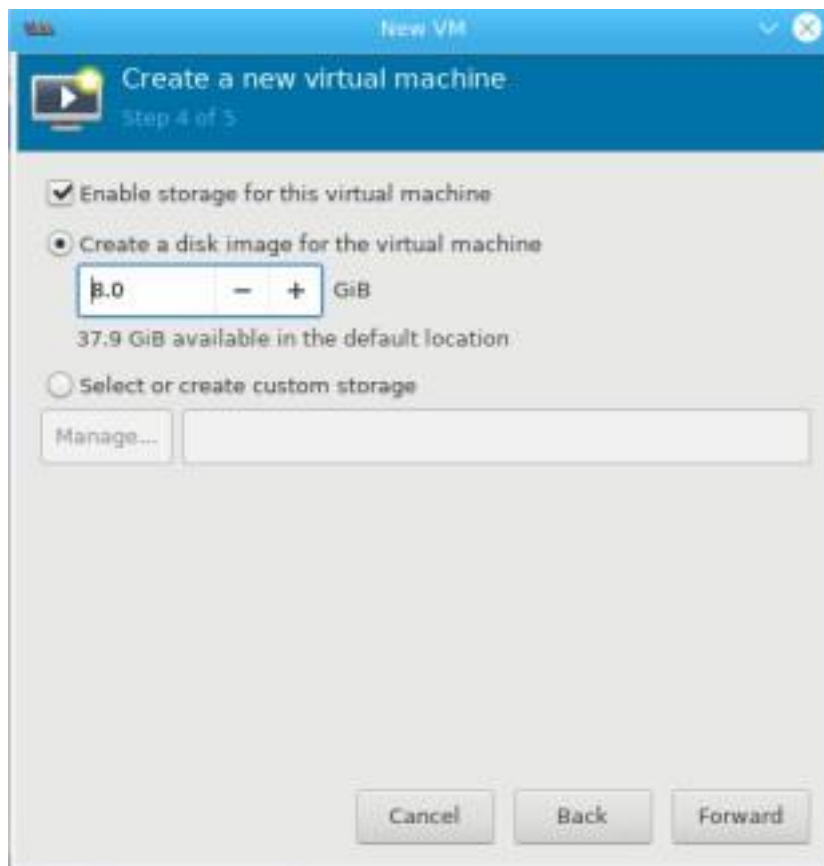
Installation/Configuration Steps:

1. Install the required packages for virtualization dnf install xen virt-manager qemu libvirt

2. Configure xend to start up on boot systemctl enable virt-manager.service

3. Reboot the machine Reboot

4. Create Virtual machine by first running virt-manager virt-manager &

5. Click on File and then click to connect to localhost

6. In the base menu, right click on the localhost(QEMU) to create a new VM 7.
Select Linux ISO image

8. Choose puppy-linux.iso then kernel version

9. Select CPU and RAM limits

10. Create default disk image to 8 GB

11. Click finish for creating the new VM with PuppyLinux

Output:

Create a new virtual machine
Step 4 of 5

☑ Enable storage for this virtual machine

● Create a disk image for the virtual machine

[8.0] [—] [+] GiB

37.9 GiB available in the default location

○ Select or create custom storage

[Manage...] [   ]

[Cancel] [Back] [Forward]

Ex No: 1b)

BASIC LINUX COMMANDS

Aim:

      To study and execute basic Unix commands related to date, echo, calendar, users, directories, file handling, filters, and process management.

Program:

 # Display current date and time

$ date

Display month only

$ date +%m

Print a message on the screen

$ echo "God is Great"

Show calendar for January 2012

$ cal Jan 2012

Use calculator

$ bc -l

16/4

5/2

Show who is logged in

$ who

Show current user

$ who am i

Show user ID

$ id

Show terminal name

$ tty

Clear the terminal

$ clear

Manual of 'ls' command

$ man ls

Show current processes

$ ps

$ ps -e

$ ps -aux

System info

$ uname -a

Show working directory

$ pwd

Create directory

$ mkdir receee

Remove directory

$ rmdir receee

Change directory

```
$ cd receee


# List files

$ ls

$ ls -l

$ ls -a


# Create a file

$ cat > rec

(Enter contents and press Ctrl+D)


# Display file contents

$ cat rec


# Copy file

$ cp rec copyfile


# Remove file

$ rm copyfile


# Move file

$ mv rec movedrec


# Find file type

$ file movedrec


# Count lines, words, characters

$ wc movedrec


# Redirect output to file

$ ls > listfile
```

Pipe example

```
$ who | wc -l
```

Tee command

```
$ who | tee userlist | wc -l
```

Use metacharacters

```
$ ls r*
$ ls ?kkk
$ ls [a-m]*
$ ls [!a-m]*
```

File permissions

```
$ ls -l college
```

Change permissions using chmod

```
$ chmod u-wx college
$ chmod u+rw, g+rw college
$ chmod g=wx college
```

Change permissions using octal

```
$ chmod 761 college
```

Grouping commands

```
$ who; date
$ who && date
$ who || date
```

Filters

```
$ head college
```

$ head -5 college

$ tail college

$ tail -5 college

$ ls -l | more

$ grep "cse" student

$ sort college

$ sort -u college

$ nl college

$ cut -c 1-5 college

Display memory

$ free -t

Output:

$ date

Mon May 27 13:20:15 IST 2025

$ echo "God is Great"

God is Great

$ cal Jan 2012

   January 2012

Su Mo Tu We Th Fr Sa

 1 2 3 4 5 6 7

 8 9 10 11 12 13 14

15 16 17 18 19 20 21

22 23 24 25 26 27 28

29 30 31

$ who

user1   tty1   2025-05-27 08:30

user2   pts/0 2025-05-27 08:45

```
$ ls
college  student  movedrec


$ wc movedrec
10 25 132 movedrec


$ chmod 761 college
# Sets permission: -rwxrw--x
```