Assignment 08

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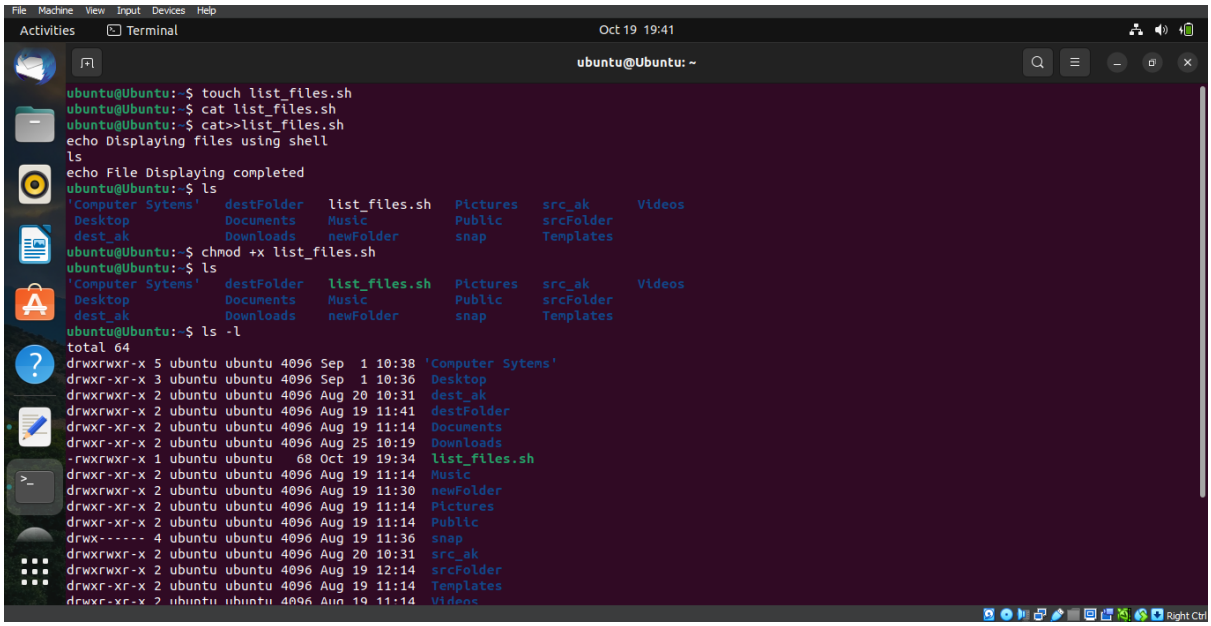
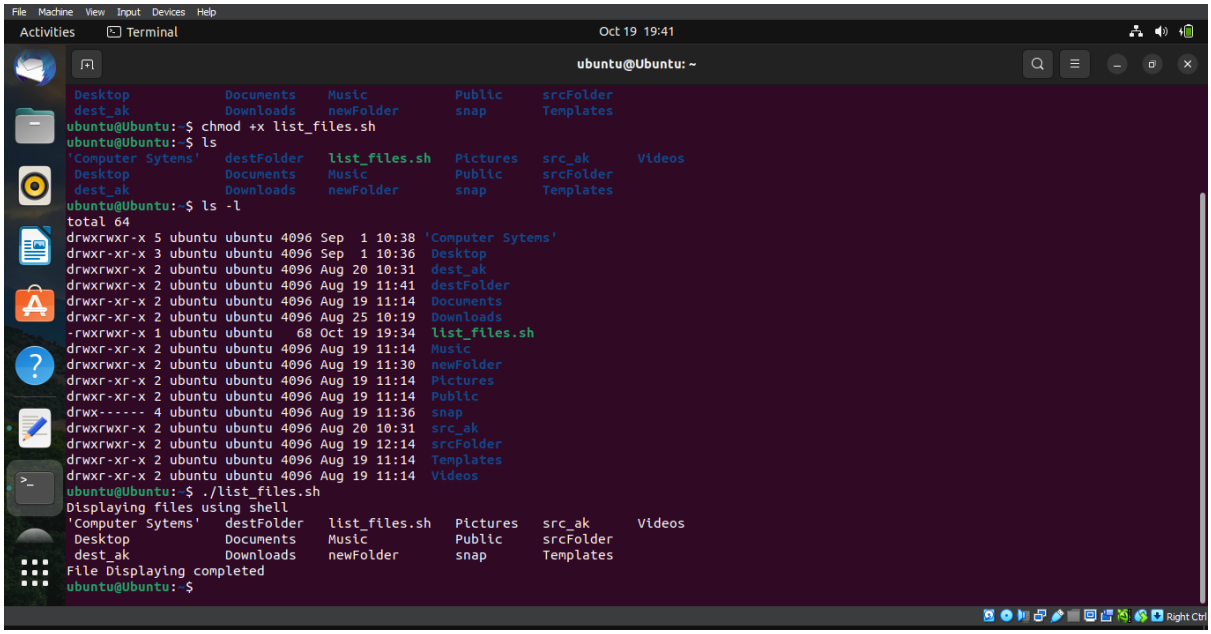
2023PCS0034

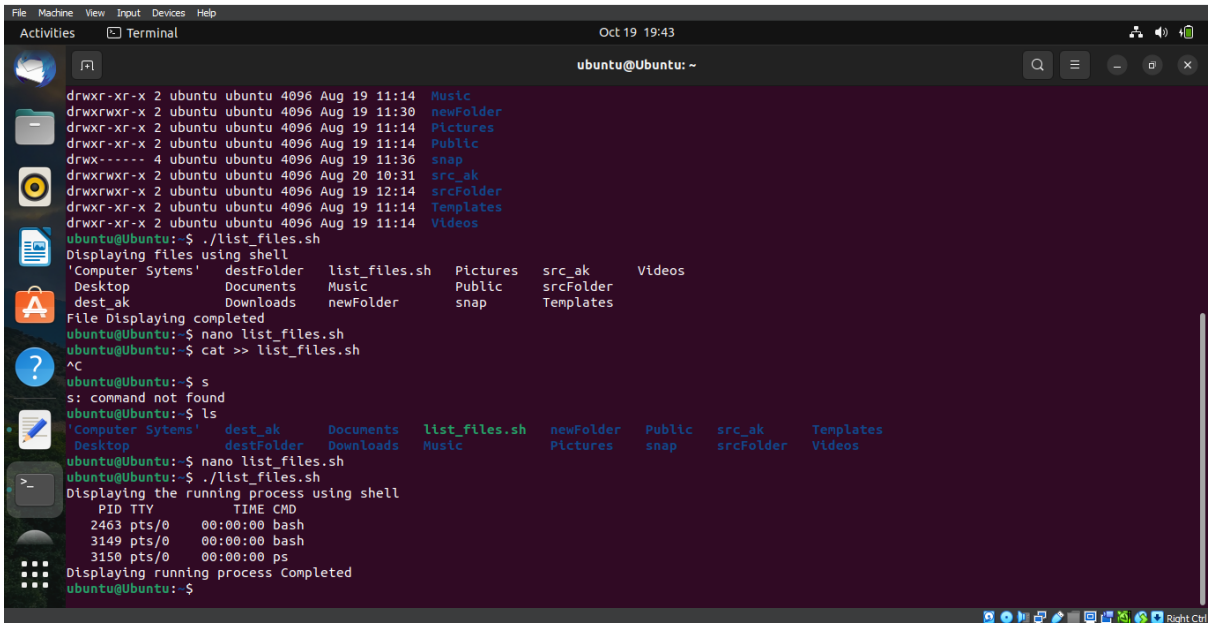
Q1) Basics on Shell Script

a. Write a shell script to display all file information in detail within the working directory

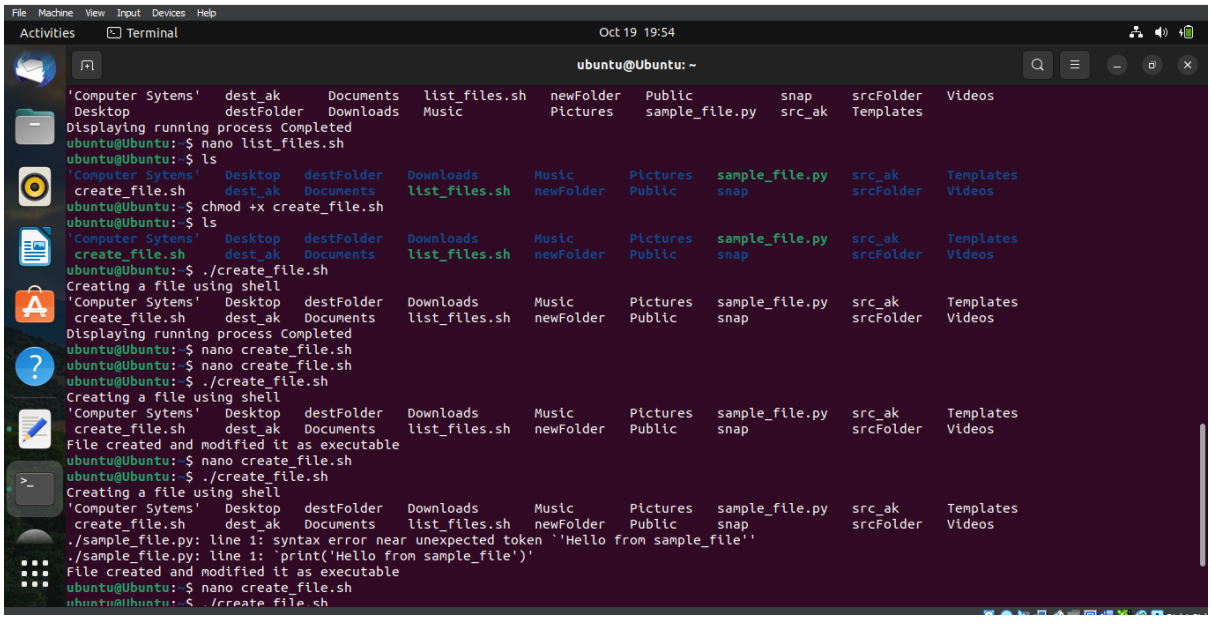




b. Write a shell script to display the running processes in the System

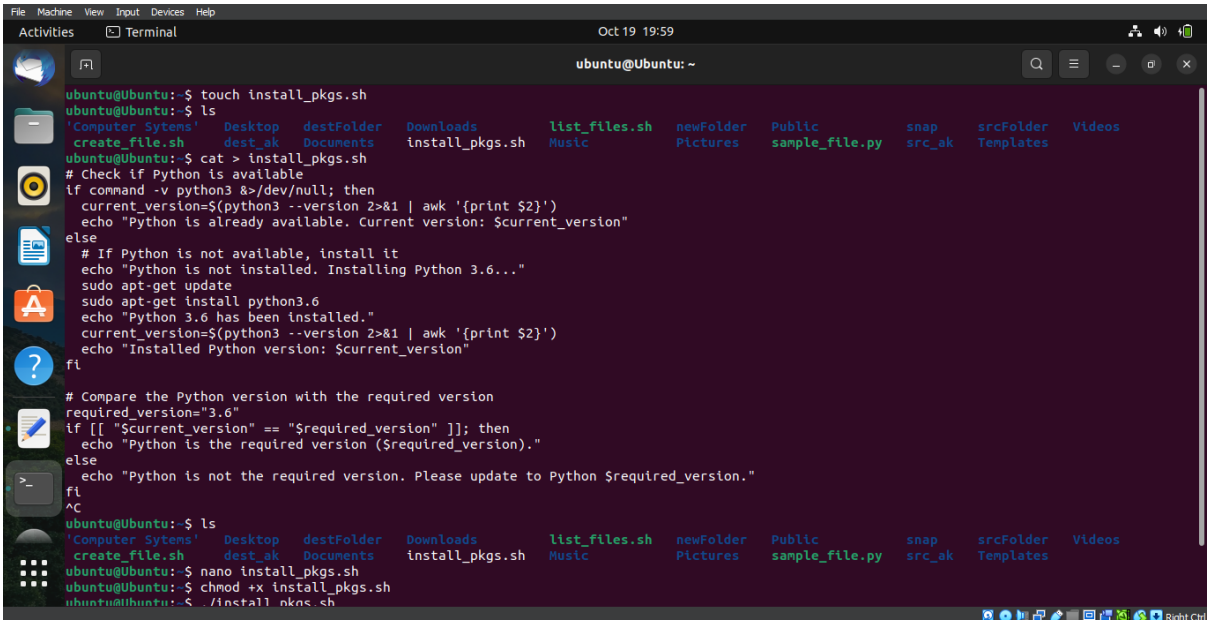


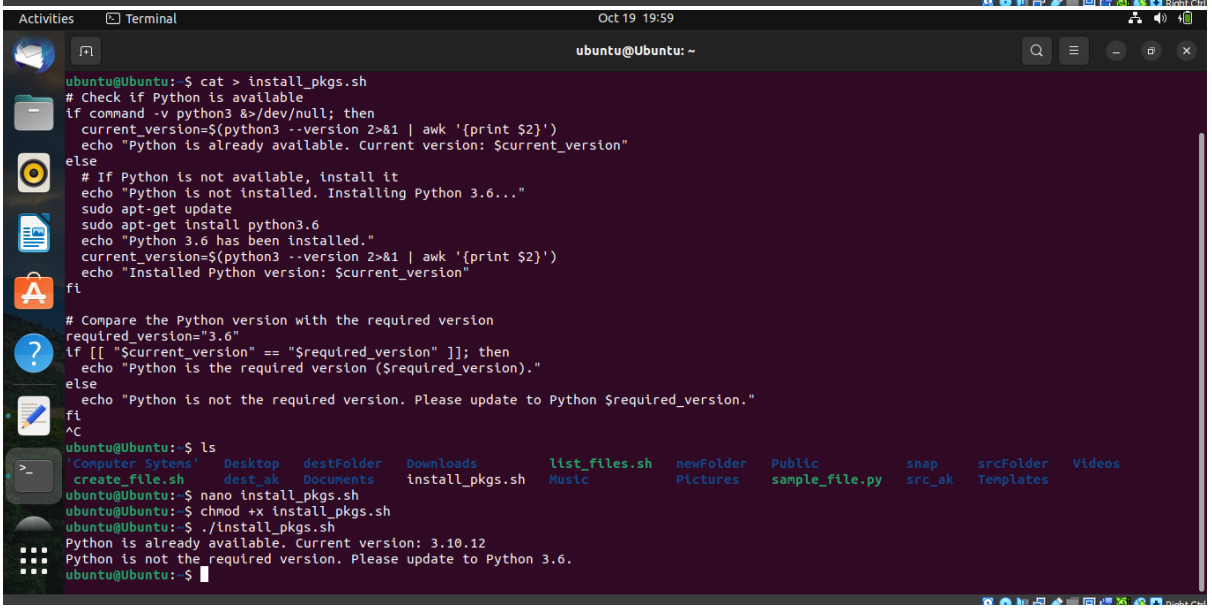
c. Write a shell script to create a file, write something into the file, and make the file executable



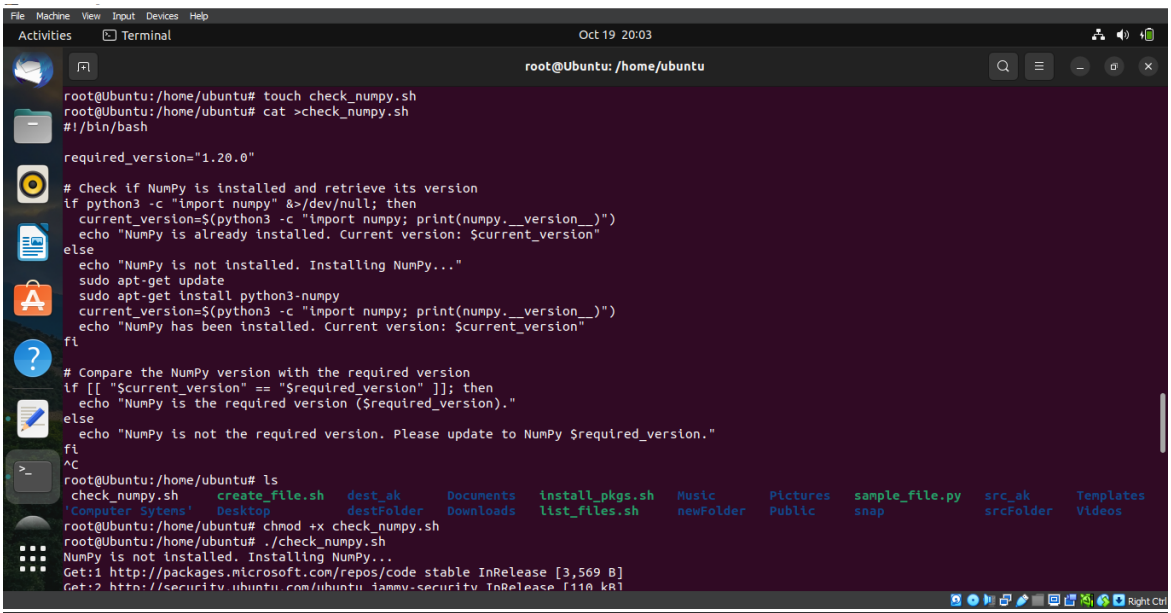
Q2) Write a shell script to install packages

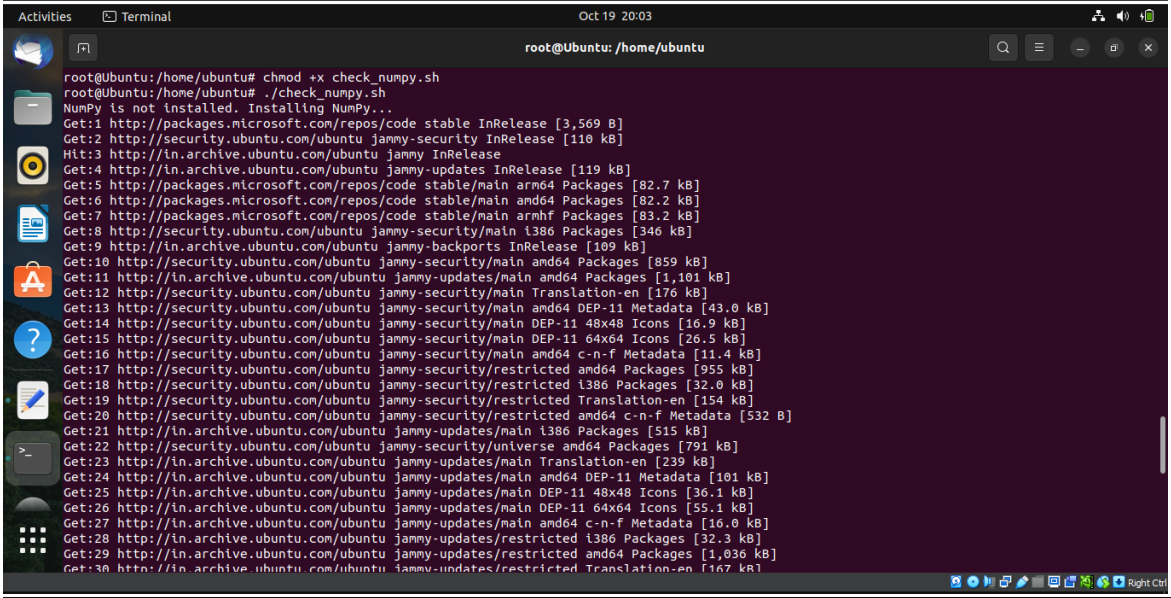
a. Python

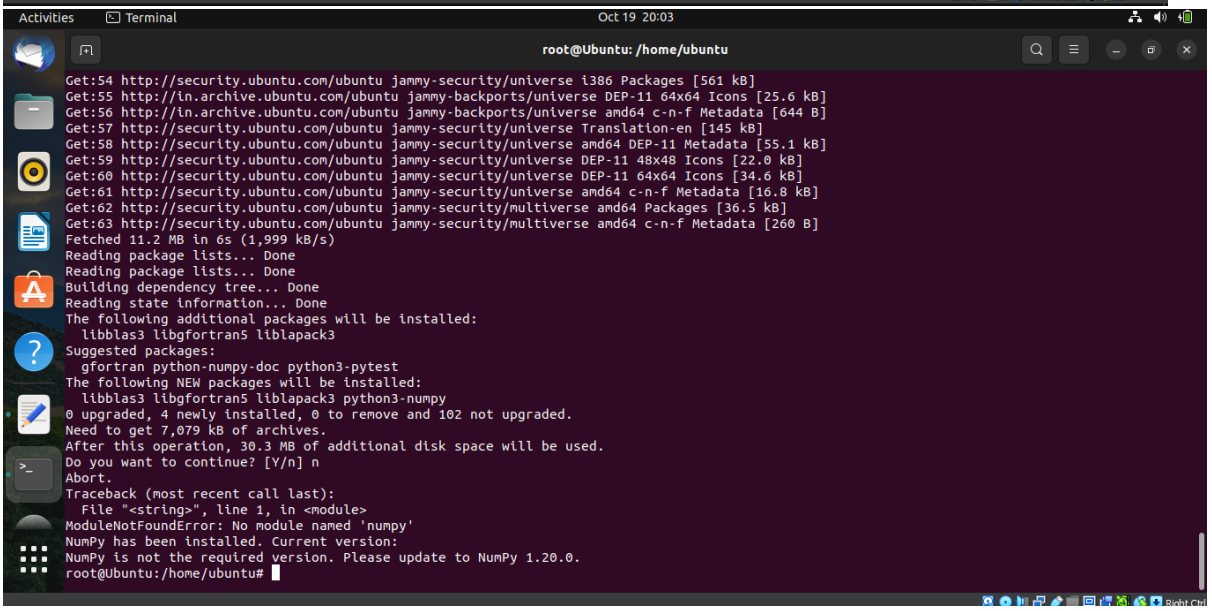




b. Numpy


File Machine View Input Devices Help
Activities
Terminal
Oct 19 20:03
root@Ubuntu: /home/ubuntu
root@Ubuntu:/home/ubuntu# touch check_numpy.sh
root@Ubuntu:/home/ubuntu# cat >check_numpy.sh
#!/bin/bash
required_version="1.20.0"
# Check if NumPy is installed and retrieve its version
if python3 -c "import numpy" &>/dev/null; then
current_version=$(python3 -c "import numpy; print(numpy.__version__)")
echo "NumPy is already installed. Current version: $current_version"
else
echo "NumPy is not installed. Installing NumPy..."
sudo apt-get update
sudo apt-get install python3-numpy
current_version=$(python3 -c "import numpy; print(numpy.__version__)")
echo "NumPy has been installed. Current version: $current_version"
fi
# Compare the NumPy version with the required version
if [["$current_version" == "$required_version"]]; then
echo "NumPy is the required version ($required_version)."
else
echo "NumPy is not the required version. Please update to NumPy $required_version."
fi
^C
root@Ubuntu:/home/ubuntu# ls
check_numpy.sh create_file.sh dest_ak Documents install_pkgs.sh Music Pictures sample_file.py src_ak Templates
'Computer Systems' Desktop destFolder Downloads list_files.sh newFolder Public snap srcFolder Videos
root@Ubuntu:/home/ubuntu# chmod +x check_numpy.sh
root@Ubuntu:/home/ubuntu# ./check_numpy.sh
NumPy is not installed. Installing NumPy...
Get:1 http://packages.microsoft.com/repos/code stable InRelease [3,569 B]
Right Ctrl


Activities
Terminal
Oct 19 20:03
root@Ubuntu: /home/ubuntu
root@Ubuntu:/home/ubuntu# chmod +x check_numpy.sh
root@Ubuntu:/home/ubuntu# ./check_numpy.sh
NumPy is not installed. Installing NumPy...
Get:1 http://packages.microsoft.com/repos/code stable InRelease [3,569 B]
Get:2 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Hit:3 http://in.archive.ubuntu.com/ubuntu jammy InRelease
Get:4 http://in.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:5 http://packages.microsoft.com/repos/code stable/main arm64 Packages [82.7 kB]
Get:6 http://packages.microsoft.com/repos/code stable/main amd64 Packages [82.2 kB]
Get:7 http://packages.microsoft.com/repos/code stable/main armhf Packages [83.2 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packages [346 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:10 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [859 kB]
Get:11 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1,101 kB]
Get:12 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [176 kB]
Get:13 http://security.ubuntu.com/ubuntu jammy-security/main amd64 DEP-11 Metadata [43.0 kB]
Get:14 http://security.ubuntu.com/ubuntu jammy-security/main DEP-11 48x48 Icons [16.9 kB]
Get:15 http://security.ubuntu.com/ubuntu jammy-security/main DEP-11 64x64 Icons [26.5 kB]
Get:16 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [11.4 kB]
Get:17 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [955 kB]
Get:18 http://security.ubuntu.com/ubuntu jammy-security/restricted i386 Packages [32.0 kB]
Get:19 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [154 kB]
Get:20 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [532 B]
Get:21 http://in.archive.ubuntu.com/ubuntu jammy-updates/main i386 Packages [515 kB]
Get:22 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [791 kB]
Get:23 http://in.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [239 kB]
Get:24 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 DEP-11 Metadata [101 kB]
Get:25 http://in.archive.ubuntu.com/ubuntu jammy-updates/main DEP-11 48x48 Icons [36.1 kB]
Get:26 http://in.archive.ubuntu.com/ubuntu jammy-updates/main DEP-11 64x64 Icons [55.1 kB]
Get:27 http://in.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [16.0 kB]
Get:28 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted i386 Packages [32.3 kB]
Get:29 http://in.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [1,036 kB]
Right Ctrl


Activities
Terminal
Oct 19 20:03
root@Ubuntu: /home/ubuntu
Get:54 http://security.ubuntu.com/ubuntu jammy-security/universe i386 Packages [561 kB]
Get:55 http://in.archive.ubuntu.com/ubuntu jammy-backports/universe DEP-11 64x64 Icons [25.6 kB]
Get:56 http://in.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [644 B]
Get:57 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [145 kB]
Get:58 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 DEP-11 Metadata [55.1 kB]
Get:59 http://security.ubuntu.com/ubuntu jammy-security/universe DEP-11 48x48 Icons [22.0 kB]
Get:60 http://security.ubuntu.com/ubuntu jammy-security/universe DEP-11 64x64 Icons [34.6 kB]
Get:61 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.8 kB]
Get:62 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [36.5 kB]
Get:63 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Fetched 11.2 MB in 6s (1,999 kB/s)
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
libblas3 libgfortran5 liblapack3
Suggested packages:
gfortran python-numpy-doc python3-pytest
The following NEW packages will be installed:
libblas3 libgfortran5 liblapack3 python3-numpy
0 upgraded, 4 newly installed, 0 to remove and 102 not upgraded.
Need to get 7,079 kB of archives.
After this operation, 30.3 MB of additional disk space will be used.
Do you want to continue? [Y/n] n
Abort.
Traceback (most recent call last):
File "<string>", line 1, in <module>
ModuleNotFoundError: No module named 'numpy'
NumPy has been installed. Current version:
NumPy is not the required version. Please update to NumPy 1.20.0.
root@Ubuntu:/home/ubuntu#
Right Ctrl

Q3) Write a Shell script for reading and saving terminal output into a file