



Laxmi Charitable Trust's
**Sheth L.U.J. & Sir M.V. College of
Arts, Science & Commerce**

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Certificate

*This is to certify that, Mr./Ms. NEERAJ .L. APRARI
Seat No. F129 studying in F.Y.B.Sc. SEM-II Computer
Science has satisfactorily completed the Practicals in the
Subject of LINUX as prescribed by University of
Mumbai, during academic year 2019-2020.*

Signature
Subject in charge
Date: - 29/02/2020

Signature
Co-ordinator B.Sc. C.S
Date: -

Signature
External Examiner
Date: -



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Department of Computer Science

Date	Topic	Sign
20/12/19	Linux Installation	{ Chauhan 11/01/20
4/01/20	Perform basic Shell Commands	
11/01/20	Perform basic settings in Linux A) Screen resolution settings B) Networking settings C) Time Settings	{ Chauhan 18/01/20
18/01/20	Install GCC package, verify if and uninstall	Chauhan 25/01/20
25/01/20	Shell Script using 'expr' command. A) Write a shell script to add two nos B) Write a shell script to multiply three nos C) Write a shell script to divide two nos D) Write a shell script to perform multiplication and subtraction of a number without using expr command E) Write a shell script to make basic calculator	{ Chauhan 25/01/20
22/02/20	Write a shell script implement if - else statement A) Write a shell script to print date with the sentence "TODAY'S DATE". B) Write a shell script to print current terminal name with username.	{ Chauhan 22/02/2020

25/10/2020 Write a shell script to execute C program on Linux

- A) Write a shell script to execute C program to find addition of two numbers
- B) Write a shell script to execute C program to find greatest of two numbers.

New Virtual Machine Wizard

* STEP 1)- PRESS ON TYPICAL THEN
CLICK NEXT

Welcome To the New Virtual Machine Wizard

1/4

WELCOME

What type of configuration do you want?

Typical (recommended)

Create a virtual machine that's suitable
for day-to-day use.

Custom (advanced)

Create a virtual machine with advanced
features, such as a SCSI controller type,
virtual disk type and compatibility with
older VMware products.

Help

< Back

Next >

Cancel

Easy Install Information

This is used to install (short).

Personal Information

Full name: Fybz

User name: Fybz

Password: **

Confirm: **

STEP2)-TYPE FULL NAME, USER NAME,
PASSWORD THEN CONFIRM PASSWORD
THEN CLICK NEXT

Help

< Back

Next >

Cancel

New Virtual Machine Wizard

Name the Virtual Machine

What name would you like to use for the virtual machine?

What machine name:

FYBZ

Location:

C:\Users\CS-2\Pictures\Virtual Machines\FYBZ

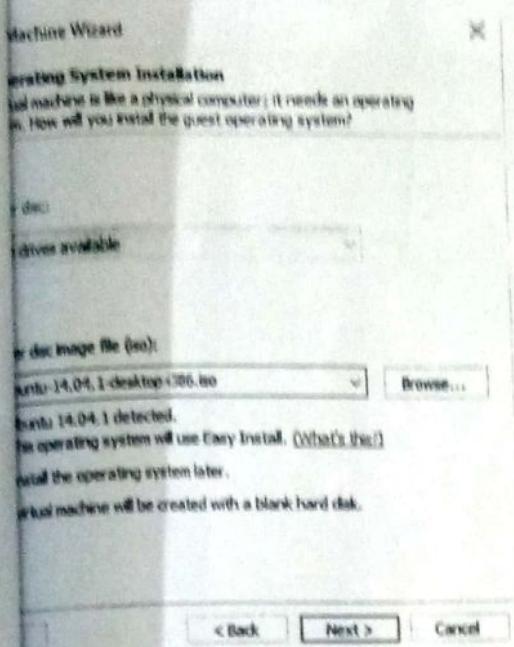
Browse...

The default location can be changed at Edit > Preferences

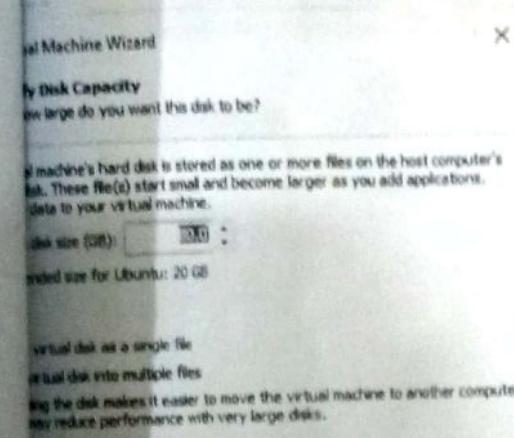
STEP3)-ENTER VIRTUAL MACHINE
NAME AND ALSO GIVE LOCATION THEN
CLICK NEXT

< Back Next > Cancel

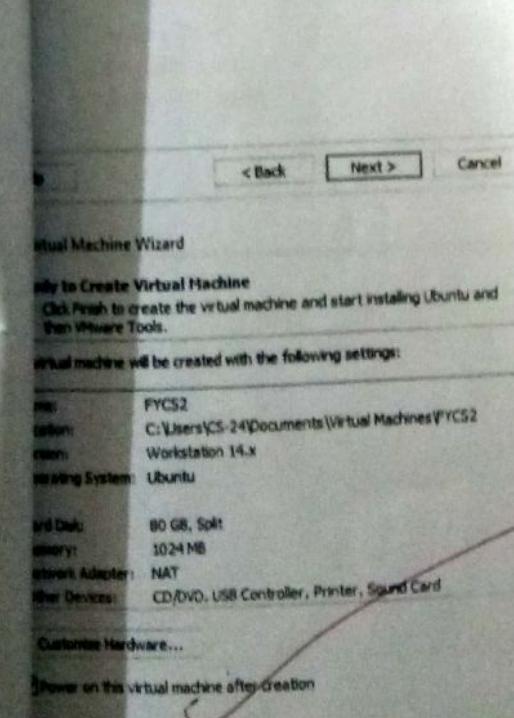
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STEP4)-BROWSE ON UBUNTU 14.04 THEN
CLICK ON NEXT



STEP5)-SELECT SPACE OF THE DISK THEN
CLICK NEXT



STEP6)-CLICK ON FINISH UBUNTU IS
INSTALLED

STEP7) ENTER
YOUR PASSWORD
UBUNTU IS
LOGGED IN



ENTOS



CentOS

CentOS is a Linux distribution that provides a free, community-supported computing platform functionally compatible with its upstream source, Red Hat Enterprise Linux. In January 2014, CentOS announced the official joining with Red Hat while staying independent from RHEL, under a new CentOS governing board.

The first CentOS release in May 2004, numbered as CentOS version 2, was forked from RHEL version 2.1AS. CentOS version 7.0 officially supports only the x86-64 architecture, while versions older than 7.0-1406 also support IA-32 with Physical Address Extension (PAE). As of December 2015, AltArch releases of CentOS 7 are available for the IA-32 architecture, Power ISA, and for the ARMv7hi and AArch64 variants of the ARM architecture. Building of CentOS 8 started at May 2019. CentOS 8 was released on 24 September 2019.

History

Prior to becoming known under its current name, CentOS originated as a build artifact of CAOS Linux, which was started by Gregory Kurtzer.

In June 2006, David Parsley, the primary developer of Tao Linux (another RHEL clone), announced the retirement of Tao Linux and its rolling into CentOS development. Tao users migrated to the CentOS release via yum update.

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In July 2009, it was reported in an open letter on the CentOS project web site that CentOS's founder, Lance Davis, had disappeared in 2008. Davis had ceased contribution to the project, but continued to hold the registration for the CentOS domain and PayPal account. In August 2009, the CentOS team reportedly made contact with Davis and obtained the centos.info and centos.org domains.

In July 2010, CentOS overtook Debian to become the most popular Linux distribution for web servers, with almost 30% of all Linux web servers using it. Debian retook the lead in January 2012.

In January 2014, Red Hat announced that it would sponsor the CentOS project, "helping to establish a platform well-suited to the needs of open source developers that integrate technologies in and around the operating system". As a result of these changes, ownership of CentOS trademarks was transferred to Red Hat, which now employs most of the CentOS head developers; however, they work as part of Red Hat's Open Source and Standards team, which operates separately from the Red Hat Enterprise Linux team. A new CentOS governing board was also established.

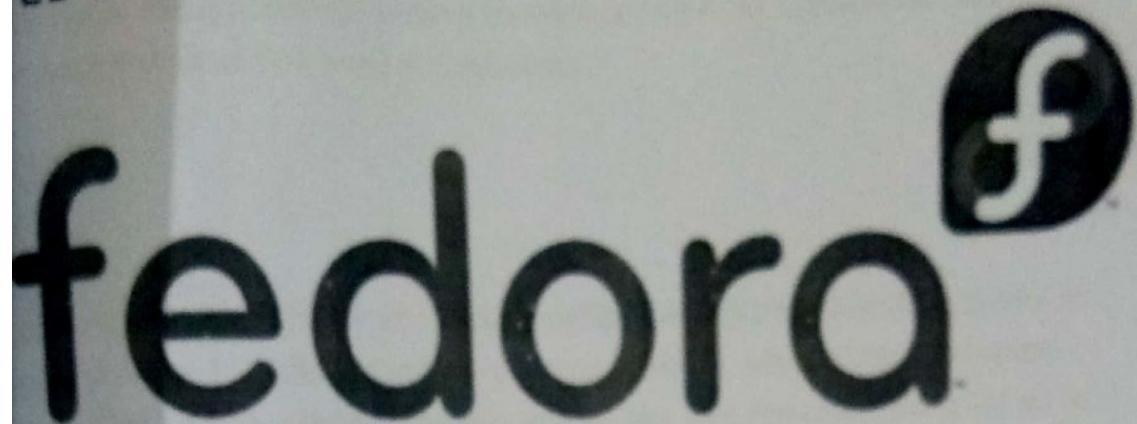
CentOS releases

CentOS version numbers for releases older than 7.0 have two parts, a major version and a minor version, which correspond to the major version and update set of Red Hat Enterprise Linux (RHEL) used to build a particular CentOS release. For example, CentOS 6.5 is built from the source packages of RHEL 6 update 5 (also known as RHEL version 6.5), which is a so-called "point release" of RHEL 6.[28]

Starting with version 7.0, CentOS version numbers also include a third part that indicates the monthstamp of the source code the release is based on. For example, version number 7.0-1406 still maps this CentOS release to the zeroth update set of RHEL 7, while "1406" indicates that the source code this release is based on dates from June 2014.

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EDORA



Fedora or Fedora Linux is a Linux distribution developed by the community-supported Fedora Project which is sponsored primarily by Red Hat Inc. with minor support by other companies. Fedora contains software distributed under various free and open-source licenses and aims to be on the leading edge of free technologies. Fedora is the upstream source of the commercial Red Hat Enterprise Linux distribution.

Since the release of Fedora 30, five different editions are currently available: Workstation, focused on the personal computer, Server for servers, CoreOS, focused on cloud computing, Silverblue, focused on an immutable desktop specialized to container-based workflows and IoT, focused on IoT devices

As of February 2016, Fedora has an estimated 1.2 million users, including Linus Torvalds (as of 2015), creator of the Linux kernel.

Package management

Most Fedora editions use the RPM package management system, using DNF as a tool to manage the RPM packages. DNF uses libolv, an external dependency resolver. Flatpak is also supported by default, and support for Ubuntu's snaps can also be added. Fedora uses Delta RPM when updating installed packages to provide Delta update. A Delta RPM contains the difference between an old and new version of a package. This means that only the changes between the installed package and the new one are downloaded reducing network traffic and bandwidth consumption.

Fedora CoreOS and Silverblue editions use rpm-ostree, a hybrid transactional image/package system to manage the host. Traditional DNF (or other systems) should be used in containers.

Security

Fedora uses Security-Enhanced Linux by default, which implements a variety of security policies, including mandatory access controls, which Fedora adopted early on.^[26] Fedora provides hardening wrapper, and does hardening for all of its packages by using compiler features such as position-independent executable (PIE).

Software

Fedora comes preinstalled with a wide range of software such as LibreOffice and Firefox. Additional software is available from the software repositories and can be installed using the DNF package manager or GNOME Software.

GNOME Software, Fedora's default package manager front-end

Additionally, extra repositories can be added to the system, so that software not available in Fedora can be installed easily. Software that is not available via official Fedora repositories, either because it doesn't meet Fedora's definition of free software or because its distribution may violate US law, can be installed using third-party repositories. Popular third-party repositories include RPM Fusion free and non-free repositories. Fedora also provides users with an easy-to-use build system for creating their own repositories called Copr.

Since the release of Fedora 25, the operating system defaults to the Wayland display server protocol, which replaced the X Window System.

RED HAT LINUX



Red Hat Linux, created by the company Red Hat, was a widely used Linux distribution until its discontinuation in 2004.

Early releases of Red Hat Linux were called Red Hat Commercial Linux. Red Hat published the first non-beta release in May 1995. It was the first Linux distribution to use the RPM Package Manager as its packaging format, and over time has served as the starting point for several other distributions, such as Mandriva Linux and Yellow Dog Linux.

In 2003, Red Hat discontinued the Red Hat Linux line in favor of Red Hat Enterprise Linux (RHEL) for enterprise environments. Fedora, developed by the community-supported Fedora Project and sponsored by Red Hat, is a free-of-cost alternative intended for home use. Red Hat Linux 9, the final release, hit its official end-of-life on April 30, 2004, although updates were published for it through 2006 by the Fedora Legacy project until that shut down in early 2007.

Features

Version 3.0.3 was one of the first Linux distributions to support Executable and Linkable Format instead of the older a.out format.

Red Hat Linux introduced a graphical installer called Anaconda developed by Ketan Bagal, intended to be easy to use for novices, and which has since been adopted by some other Linux distributions. It also introduced a built-in tool called Lokkit for configuring the firewall capabilities.

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In version 6 Red Hat moved to glibc 2.1, egcs-1.2, and to the 2.2 kernel. It also introduced Kudzu, a software library for automatic discovery and configuration of hardware. Red Hat Linux was originally developed exclusively inside Red Hat, with the only feedback from users coming through bug reports and contributions to the included software packages – not contributions to the distribution as such. This was changed in late 2003 when Red Hat Linux merged with the community-based Fedora Project. The new plan is to draw most of the codebase from Fedora when creating new Red Hat Enterprise Linux distributions. Fedora replaces the original Red Hat Linux download and retail version. The model is similar to the relationship between Netscape Communicator and Mozilla, or StarOffice and OpenOffice.org, although in this case the resulting commercial product is also fully free software.

FEDORA

Version 7 was released in preparation for the 2.4 kernel, although the first release still used the stable 2.2 kernel. Glibc was updated to version 2.1.92, which was a beta of the upcoming version 2.2 and Red Hat used a patched version of GCC from CVS that they called "2.96". The decision to ship an unstable GCC version was due to GCC 2.95's bad performance on non-i386 platforms, especially DEC Alpha. Newer GCCs had also improved support for the C++ standard, which caused much of the existing code not to compile. In particular, the use of a non-released version of GCC caused some criticism, e.g. from Linus Torvalds and the GCC Steering Committee; Red Hat was forced to defend their decision. GCC 2.96 failed to compile the Linux kernel, and some other software used in Red Hat, due to stricter checks. It also had an incompatible C++ ABI with other compilers. The distribution included a previous version of GCC for compiling the kernel, called "kgcc".

Red Hat Linux lacked many features due to possible copyright and patent problems. For example, MP3 support was disabled in both Rhythmbox and XMMS; instead, Red Hat recommended using Ogg Vorbis, which has no patents. MP3 support, however, could be installed afterwards, although royalties are required everywhere MP3 is patented. Support for Microsoft's NTFS file system was also missing, but could be freely installed as well.

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ORACLE LINUX

ORACLE® LINUX

Oracle Linux (OL, formerly known as Oracle Enterprise Linux) is a Linux distribution packaged and freely distributed by Oracle, available partially under the GNU General Public License since late 2006. It is compiled from Red Hat Enterprise Linux (RHEL) source code, replacing Red Hat branding with Oracle's. It is also used by Oracle Cloud and Oracle Engineered Systems such as Oracle Exadata and others.

Potential users can freely download Oracle Linux through Oracle's E-delivery service (Oracle Software Delivery Cloud) or from a variety of mirror sites, and can deploy and distribute it without cost. The company's Oracle Linux Support program aims to provide commercial technical support, covering Oracle Linux and existing RHEL or CentOS installations but without any certification from the former (i.e. without re-installation or re-boot). [clarification needed] As of 2016 Oracle Linux had over 15,000 customers subscribed to the support program.

RHEL compatibility

Oracle Corporation distributes Oracle Linux with two alternative Linux kernels:

Red Hat Compatible Kernel (RHCK) – identical to the kernel shipped in RHEL

Unbreakable Enterprise Kernel (UEK[7]) – based on newer mainline Linux kernel versions, with Oracle's own enhancements for OLTP, InfiniBand, SSD disk access, NUMA-optimizations, Reliable Datagram Sockets (RDS), async I/O, OCFS2, and networking.

Oracle promotes Unbreakable Enterprise Kernel as having 100% compatibility with RHEL. Oracle claims this allows unchanged installation and run of Oracle

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middleware and third-party RHEL-certified applications, but it does not provide any reference to third-party documentation.

Hardware compatibility

Oracle Linux is certified on servers including from IBM, Hewlett-Packard, Dell, Lenovo, and Cisco. In 2010, Force10 announced support for Oracle VM Server for x86 and Oracle Linux. Oracle Linux is also available on Amazon EC2 as an Amazon Machine Image, and on Microsoft Windows Azure as a VM Image.

Oracle/Sun servers with x86-64 processors can be configured to ship with Oracle Linux.

Visit the Hardware Certification List for the complete list of the certified hardware on Oracle Linux and Oracle VM. In November 2017, Oracle announced Oracle Linux on the ARM platform with support for the Raspberry Pi 3, Cavium ThunderX and X-Gene 3.

Virtualization support

Under the Oracle Linux Support program, Oracle Linux supports KVM and Xen.

Other Oracle products are only supported under the Xen-based Oracle VM Server for x86.

Sun Fire systems

In March 2012, Oracle submitted a TPC-C benchmark result using a Sun Fire server running Oracle Linux and Unbreakable Enterprise Kernel. With 8 Intel Xeon processors running Oracle DB 11 R2, the system is able to handle over 5.06 million tpmC (New-Order transactions per minute while fulfilling TPC-C[26]). The server is the third fastest TPC-C non-clustered system and is the fastest x86-64 non-clustered system.

Oracle also submitted a SPECjEnterprise2010 benchmark record using Oracle Linux and Oracle WebLogic Server, and achieved both a single node and an x86 world record result of 27,150 EjOPS (SPECjEnterprise Operation/second).

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MANDRIVA LINUX



tips

Mandriva Linux (a fusion of the French distribution Mandrakelinux or Mandrake Linux and the Brazilian distribution Conectiva Linux) was a Linux distribution developed by Mandriva S.A. Each release lifetime was 18 months for base updates (Linux, system software, etc.) and 12 months for desktop updates (window managers, desktop environments, web browsers, etc.). Server products received full updates for at least 5 years after their release. The last release of Mandriva Linux was in August 2011. Most developers who were laid off went to Mageia. Later on, the remaining developers teamed up with community members and formed OpenMandriva, a continuation of Mandriva.

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History

The first release of Mandrake was based on Red Hat Linux (version 5.1) and K Desktop Environment 1 in July 1998. It has since moved away from Red Hat's distribution and has become a completely separate distribution in its own right. Mandriva now includes a number of original tools, mostly to ease system configuration. Mandriva Linux is the brainchild of Gaël Duval, who wanted to focus on ease of use for new users.

This goal was met as Mandrake Linux gained a reputation as "one of the easiest to install and user-friendly Linux distributions". At this time Internet Explorer held a dominant share of the web browser market, and Microsoft a near monopoly in operating systems. Web browsers for Linux were limited to Mozilla, followed by a variety of poorly performing Linux-specific browsers such as Konqueror or Galeon. Mandrake Linux earned praise as a Linux

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distribution that users could use all the time, without dual booting into Windows for compatibility with web sites or software unavailable under Linux. CNET called the user experience of Mandrake Linux 8.0 the most polished available at that time. Duval became the co-founder of Mandrakesoft, but was laid off from the company in 2006 along with many other employees.

Name changes

Installation screen of Linux-Mandrake 8.0

From its inception until the release of version 8.0, Mandrake named its flagship distribution Linux-Mandrake. From version 8.1 to 9.2 the distribution name was reversed and called Mandrake Linux. In February 2004, MandrakeSoft lost a court case against Hearst Corporation, owners of King Features Syndicate.

Hearst contended that MandrakeSoft infringed upon King Features' trademarked character Mandrake the Magician. As a precaution, MandrakeSoft renamed its products by removing the space between the brand name and the product name and changing the first letter of the product name to lower case, thus creating one word. Starting from version 10.0, Mandrake Linux became known as mandrakelinux, and its logo changed accordingly.

Similarly, MandrakeMove (a Live CD version) became Mandrakemove. In April 2005, Mandrakesoft announced the corporate acquisition of Conectiva, a Brazilian-based company that produced a Linux distribution for Portuguese-speaking (Brazil) and Spanish-speaking Latin America. As a result of this acquisition and the legal dispute with Hearst Corporation, Mandrakesoft announced that the company was changing its name to Mandriva, and that their Linux distribution Mandrake Linux would henceforward be known as Mandriva Linux.

Features

Installation, control and administration

Mandriva Linux contained the Mandriva Control Center, which eases configuration of some settings. It has many programs known as Drakes or Draks, collectively named drakxtools, to configure many different settings. Examples include MouseDrake to set up a mouse, DiskDrake to set up disk partitions and drakconnect to set up a network connection. They are written using GTK+ and Perl, and most of them can run in both graphical and text mode using the ncurses interface.

ALT + END



Practical 2

Aim - Perform basic shell command

1] ls

Description - It displays the files and directories located in your correct directory

Code - ls

Desktop Downloads Music Public Templates
Documents file1 Pictures sky Videos

2] ls -a

Description - It displays hidden files along with normal files

Code - ls -a

Output - . Desktop .gtk-bookmarks Public
. Downloads .gvfs .pulse
.bash_history Documents .ICEauthority .pulse-cookies

3] ls -l

Description - It produces a long listing providing more information about each file in the directory

A) file type

B) Permission of file

C) Owner of file

D) Size of file

E) Time of file last modified

F) Directory file



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Code : ls -l

Output : drwxr-xr-x 2 TYIT TYIT 0 4096 Oct 20 2018 Desktop
drwxr-xr-x 2 TYIT TYIT 4096 Oct 20 2018 Documents
drwxr-xr-x 2 TYIT TYIT 4096 Oct 20 2018 Downloads
-rw-rw-r-- 1 TYIT TYIT 0 Jan 2 17:33 file7

4] touch

Description : touch command creates new file
Code : touch file22
Output : file created.

5] cp

Description : It copies the files and directories from one location to another

Code : cp file22 file33

Output : location changed.

6] mv

Description : Rename a file is called moving

Code : mv file22 file44

Output : file name changed

7] rm

Description : This command removes the file

Code : rm file44

Output : file deleted deleted



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8) `mkdir`

Description - It creates a new directory in Linux
Code - `mkdir test1`
Output - Directory created.

9) ~~rmkdir~~ `rmdir`

Description - It removes the directory
Code - `rmdir test1`
Output - Directory removed

10) `cat`

Description - It displays all of the data inside a
text file

Code - `cat test33`

Output - apple

oam

orange

banana

peru

11) `cat -n`

Description - It displays all of the data inside a
text file with serial number

Code - `cat -n file33`

Output - 1 apple

2 oam

3 orange

4 banana

5 peru



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2 cat -b

Description - It displays the number of lines that have text in them.

Code : cat -b file33

Output : 1 apple

2 aam

3 orange

4 banana

5 peru

3 pwd

Description - It prints the absolute path in to current working directory

Code : pwd

Output : /home/7YIT

4 cal

Description - It displays the calendar of current month

Code : cal

Output :

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	



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15) date

Description - It displays the current date and time
Code : date

Output : Sat Jan 4 11:36:48 IST 2020

16) tty

Description - It displays the current terminal
Code : tty

Output : /dev/pts/2

17) whoami

Description : It displays reveals the user who is currently logged in
Code : whoami

Output : TYIT

18) clear

Description : This command clears the screen

Code : clear

Output : screen cleared

19) whatis

Description : This command gives one line description about the command

Code : whatis date

Output : date (1) - print or set the system date and time



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2) man

Description :- It displays the manual page for particular command

Code :- man date

Output - date Name

date - print or set the system date and time

2) w

Description :- It is used to check whether which users are logged into the system and what command they are executing at that time

Code :- w

Output :- TWTT pts/2 :0.0 17:32 0.00s 0.01s 0.01s w

2) terminal df

Description - It displays the file system uses.

Code :- df

Output :-

filesystem	1k-blocks	Used	Available	Use%	Mounted on
/dev/psda7	81405680	3608908	73641564	5%	/
none	4	0	4	0%	/sys/fs/cgroup
udev	503172	4	503168	1%	/dev

3) netstat

Description - It is used to check the network statistic of system

Code - netstat



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Output - Network connection displayed.

23) history -

Description - This command Shows the command you have entered on your terminal so far

Code - history

Output - 1 #!/bin/bash

2 \$reading values in a list

3 date

4 who

24) passwd

Description - It is used to change the password of the current user locked in the system.

Code - passwd

Output - changing password for fycs 2.

current UNIX password:

Enter new UNIX password

25) shutdown -n now

description:- It is used to shutdown the computer

Code - shutdown -n now

Output : pc shutdown

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Practical No 3

- Aim:
- A. Screen Resolution - Find the current screen resolution of your desktop
 - B. Network - Get the current networking configuration of desktop
 - C. Time Setting - Change the time setting of your system to different time zone. (Example - Change the current time zone to New York, Australia)

A. Screen Resolution:

- 1 Go to the control setting on the top right of the screen
- 2 Click on system setting
- 3 Click on display in the hardware
- 4 Click on the Resolution drop-down option and select your preference

B. Network:

- 1 Go to the control setting on the top right of the screen
- 2 Click on system setting
- 3 Click on network in the hardware
- 4 Click on the name of the network you want and then click connect
- 5 If the network is protected by the password (encryption key), enter the password when prompted and click connect



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The network icon will change appearance as the computer attempts to connect to the network

Time Setting

Go to the control setting on the top right of the screen

Click on system setting.

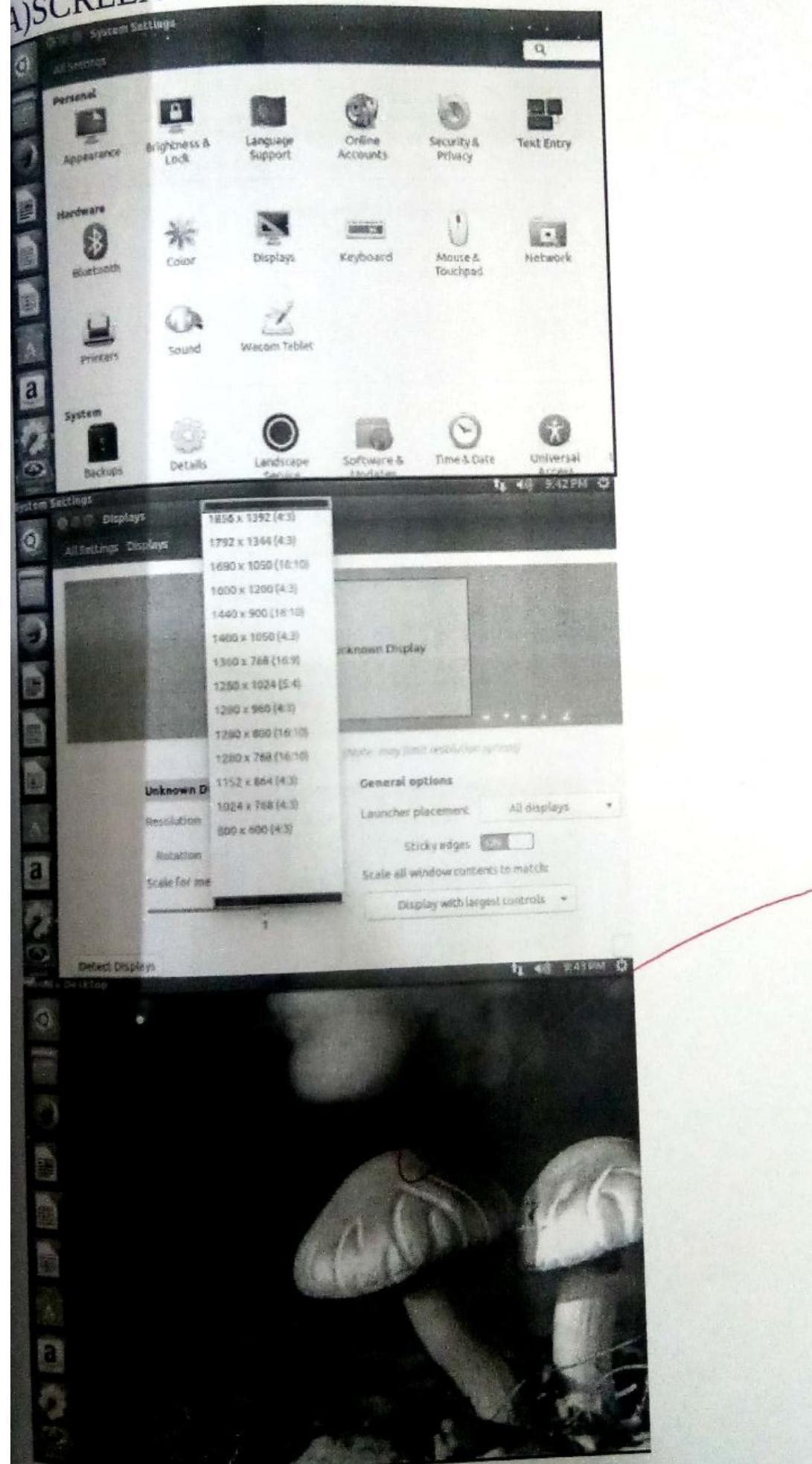
Click on Time and Date in the system

Click on manually in the set the time option
Type the name of the country/capital of which you want to set the time in location option.

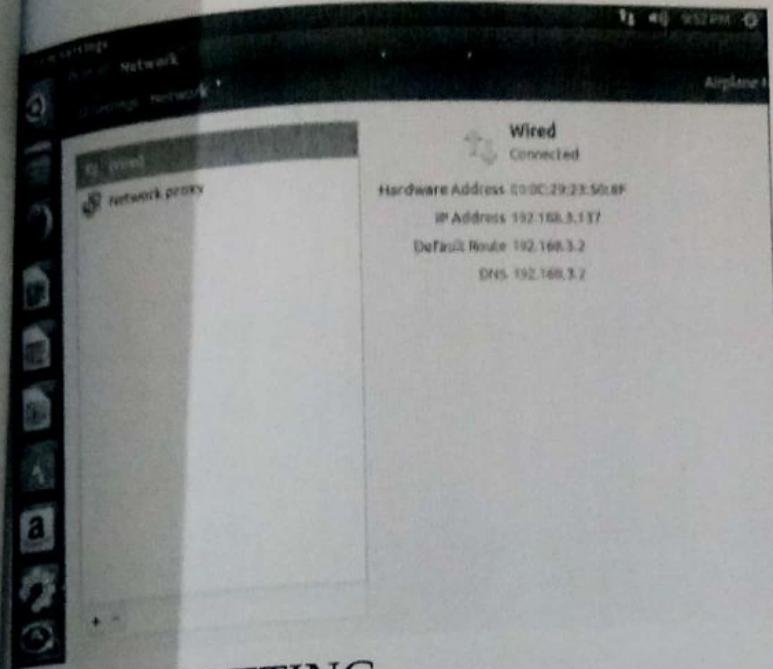
✓ 8

PRACTICAL 3

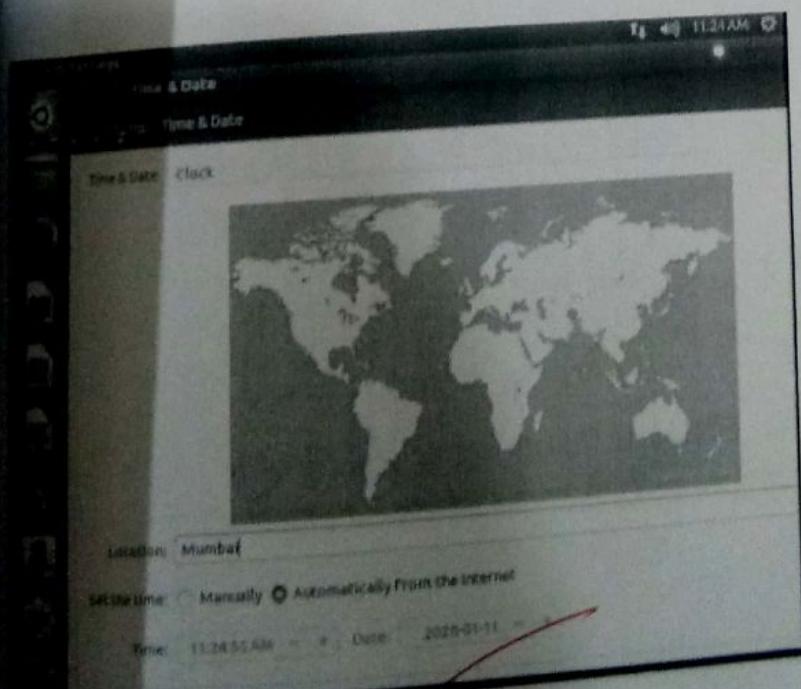
A) SCREEN RESOLUTION



B) NETWORK SETTING



C) TIME SETTING





Practical No. 4

Aim - Install GCC package, verify the package and uninstall it.

I] Installing GCC package

I. from Terminal

- a) Open your terminal by $Ctrl + Alt + T$ or from search box by typing terminal
- b) Now run the following command one by one on your terminal
Internet connection must be available on your PC in this time
 - i. `sudo add-apt-repository ppa:ubuntu-toolchain-r/test`
 - ii. `sudo apt-get update`
 - iii. `sudo apt-get install gcc-4.9 g++-4.9`
 - iv. Now the GCC compiler is installed

II. from Software Centre

- a) Open Ubuntu software centre from the search box by typing it
- b) Type 'GCC compiler' in the search box of Ubuntu software centre located on the top right corner
- c) Click on install in the result of GNU C compiler
- d) Now the ~~the~~ GCC compiler is installed

2] To verify

To verify that GCC compiler is installed run the command (`gcc -v`) in the terminal.

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3) To uninstall

To uninstall GCC compiler run the following command in terminal

sudo apt-get purge gcc-4.9

✓



Practical - 05

- A) Using the expr command write a shell script to add two numbers

```
#!/bin/bash
```

```
a=20
```

```
b=10
```

```
c='expr $a + $b'
```

```
echo "The result is $c"
```

- 2) Write a shell script which calculates and prints multiplication of three numbers

```
#!/bin/bash
```

```
a=20
```

```
b=20
```

```
c=10
```

~~```
d='expr $a * $b * $c'
```~~~~```
echo "The result is $d"
```~~

- 3) Write a shell script to perform division of two

```
a=15
```

```
b=10
```

~~```
c='expr $b / $a'
```~~~~```
echo "The result is $c"
```~~

The result is 30

The result is 2000

The result is 0.6067
✓ 8



Q) Write a Shell Script to perform multiplication and subtraction of a script of a number without using expression command

n1=100

n2=20

n3=10

nu=\$[\${n1} * (\$n2 - \$n3)]

echo "The result is \$nu"

Q) Write a Shell-Script to make basic calculator

result=0

echo "Enter first number:"

read num1

echo "Enter second number:"

read num2

echo "1: Addition"

echo "2: Subtraction"

echo "3: Multiplication"

echo "4: Division"

echo "enter your choice:"

read input

case \$input in

1)Result=`expr \$num1 + \$num2`

2)echo "Result for addition = \$result;"

2)Result=`expr \$num1 - \$num2`

echo "Result for subtraction = \$result;"

The result is 1000

Enter first number: 20

Enter second number: 10

1: Addition

2: Subtraction

3: Multiplication

4: Division

Enter your choice: 1

Result for addition = 30



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- 3) Result = `expr \$num1 * \$num2
echo "Result" for multiplication = \$result ;`
- 4) Result = `expr \$num1 / \$num2
echo "Result" for division = \$result ;`
- 4) echo "INVALID CHOICE" ;

ESAC

✓ 8

Output

Thu Jan 23 16:22:48 IST 2021
TODAY'S DATE

/dev/pts/0

Output.

50 is greater than 30

Practical - 06

Q1 - Write a shell script to print date & time

#!/bin/bash

if date

then

echo "Today's date"

fi

9

Write a shell script to print current terminal name with username

#!/bin/bash

if tty

then

who am i

fi

Write a shell script to check greater of two numbers

#!/bin/bash

a=30

b=50

if \$a -gt \$b

then

echo '\$a is greater than \$b'

else

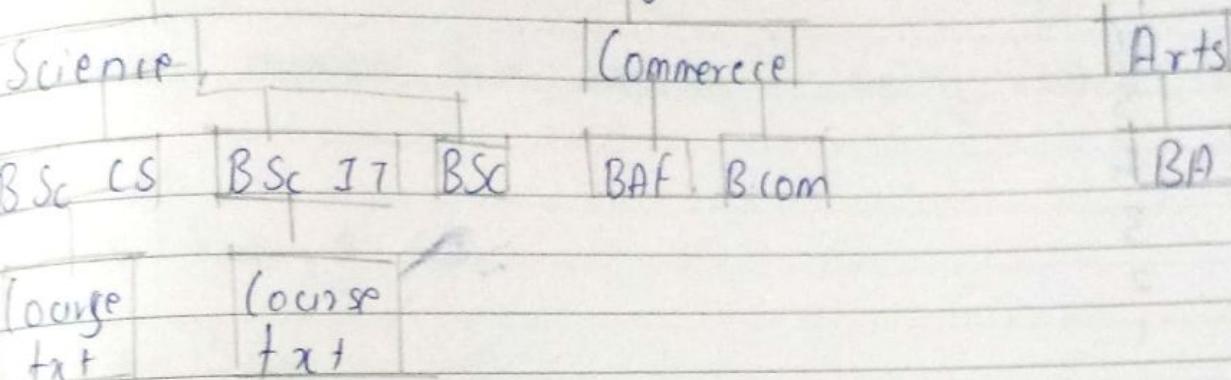
"... smaller than \$b"



Practical 07

Aim - Create a following directory tree structure

9



Input

\$ mkdir college

\$ cd college

\$ mkdir Science Commerce Arts

\$ cd

\$ cd college/Science

\$ mkdir BSC-CS BSC-IT BSC

\$ cd

\$ cd college/commerce

\$ mkdir BAF BCom

\$ cd

\$ cd college/Arts

\$ mkdir BA

\$ cd ..

\$ cd college/science/BSC-CS

\$ touch course-fit

\$ touch course.txt

\$ cd ..

Output

\$ touch prac8.1
\$ chmod u+x prac8.1
\$ l - prac8.1

10

9

8

7

6

5

4

3

2

1

Output:

\$ chmod u+x ~~prac8.2~~
\$ l - ~~prac8.2~~

4

7

10

13

16

19

22

25

28

31

34

37

40

43

Practical No - 08

Aim - Write a shell script to print the number from 10 to 1 using while command

#!/bin/bash
printing number from 10 to 1 using while command

var=10
while [\$var -gt 0]
do

echo \$var
var=\$[\$var - 1]

done

Aim - Write a shell script to print the numbers from 1 to 50 with an interval of 3

var=1
while [\$var -le 50]
do
echo \$var
var=\$((\$var + 3))

done

Output

{ chmod u+x proc 8.3
{ . / proc 8.3 }

30

32

34

36

38

40

42

44

46

48

50

52

54

56

58

60

✓

Output:

{ chmod u+x proc 8.4
{ . / proc 8.4 }

1470

Aim - Write a Shell script to print all even nos from 30 to 60 using while command

#!/bin/bash

#print all even nos from 30 to 60

var = 30

while [\$var -le 60]

do

echo \$var

var= \$((\$var+2))

done

Aim - Write a Shell script to display sum of number between 60 to 80 using while loop

#!/bin/bash

#display

sum of nos from 60 to 80

i=60

while [\$i -le 80]

do

sum= \$((\$sum + \$i))

i= \$((\$i+1))

done

echo \$sum

Output

\$ chmod +x proc8.s

\$./proc8.s

23

✓ 9



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Q) Aim - Write a shell script to find difference of sum of all even and sum of all odd nos between 1 to 50

9

```
#!/bin/bash
var I=1
even = 0
odd = 0
diff = 0
while [ $var I -le 50 ]
do
    if [ `expr $var I % 2` -eq 0 ]
    then
        even = `expr $even + $var I`
    else
        odd = `expr $odd + $var I`
    fi
    var I= [ $(($var I + 1)) ]
done
diff = `expr $even - $odd`
echo $diff
```

Output : \$ chmod u+x pval 8-6

0
1
1
2
3
8
9
13

20365011074 8
32951280099



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Aim - Write a shell script to print Fibonacci Series
up to 50

#!/bin/bash

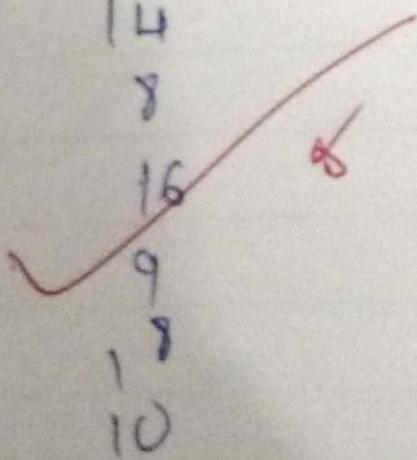
i=0
fb=0
n=0
m=1

echo \$n
echo \$m
while [\$i -le 50]
do
fb=\$[\$n + \$m]
echo \$fb
i=\$[\$i + 1]
n=\$m
m=\$fb

done

$$\text{Output} = \begin{cases} \text{chmod } u+t & \text{proc } \sigma \\ \text{proc } t \cdot \delta \cdot ? & \end{cases}$$

7
4
3
6
4
8
5
10
6
12
7
14
8
16
9
1
10





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ALNRAO

Write a shell script to print numbers in following sequence 7, 4, 9, 6, 11, 8, 13

#!/bin/bash

var 1=1

var 2=7

var 3=4

echo \${var 2}

echo \${var 3}

while [\${var -le 10}]

do

var 2=\$((\${var 2} + 2))

echo \${var 2}

var 3=\$((\${var 3} + 2))

echo \${var 3}

var = \$((\${var} + 1))

done

Output
\$ chmod +u+x ./proc
\$./proc q.1
100
75
50
25

Output
\$ chmod +u+x ./proc
\$./proc q.2
1
2
3
4
loop completed



Practical No. 9

Aim - Write a Shell script to print numbers from 100 to 0 at interval of 25 using until loop

```
#!/bin/bash
var1=100
until [ $var1 -eq 0 ]
do
    echo $var1
    var1=$((var1-25))
```

done

Aim - Write a shell script to print 1 to 5 numbers using for loop

```
#!/bin/bash
for var in 1 2 3 4 5
do
    if [ $var -eq 5 ]
    then
        break
    fi
    echo $var
done
echo "loop completed"
```

Output:

\$ chmod u+x
\$./prac a.b

1

2

3

4

5

~~8~~ 10

11

12

13

14

8

prac a.b



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Aim: Write a Shell script to print following patterns 1,2,3,4,5,10,11,12,13,14

```
#!/bin/bash
for ((n=1; n<15; n++))
do
    if [ ${n} -gt 5 ] || [ ${n} -lt 10 ]
    then
        continue
    fi
    echo ${n}
done
```



Practical - 10

Aim - Write a Shell script to execute C program in Linux

Write a C program in Linux to find addition of
two numbers

```
#include<stdio.h>
void main()
{
    int a, b, sum;
    printf("\n Enter any two numbers:");
    scanf ("%d %d", &a, &b)
    sum = a + b;
    printf("The addition of a and b is : %d \n", sum);
}
```

Output: ~~gedit hello.c
gcc -o greet.c
./greet~~ gcc -o ccc
~~./hello.c~~

```
gcc  k.c  
gcc -o k  k.c  
$1 K
```

Enter any two numbers: 10
20

Addition is 30

✓ 9



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PLNRPD

Q) Write a C program to find greatest of two numbers

#include <stdio.h>

void main()

{

int a,b;

printf("Enter two numbers:");

scanf("%d %d", &a, &b);

{

R(a>b)

printf("%d is greater than %d\n", a, b);

else

printf("%d is greater than %d\n", b, a);

}

}

~~Output:- great~~

~~gcc -O great great~~

~~-I great~~

gcc k.c

gcc -o k k.c

Enter any two number 10
20

20 ~~is~~ greater than 10

✓ 8