Assignment No:1

1. Explain about etc/passwd file.

Ans: The `/etc/passwd` file is a crucial system file found in Unix-like operating systems, including Linux. It plays a fundamental role in user authentication and managing user account information. It is used to keep track of every registered user that has access to a system. Directly editing the `/etc/passwd` file is not recommended, as mistakes can lead to login issues. Instead, Linux provides commands like `useradd`, `usermod`, and `userdel` to manage user accounts. These commands update both the `/etc/passwd` and `/etc/shadow` files appropriately.

The fields found in the `/etc/passwd` file:

1. Username : This field contains the username of the user. It is used to identify users when they log in.

2. User ID (UID): This is a unique numerical identifier associated with the user. Each user on the system must have a unique UID. The root user typically has a UID of 0.

3. Group ID (GID): This field represents the primary group of the user. Each user is a member of at least one group, and this field defines the user's primary group.

2. What is the usage of chage command in linux?

Ans: The chage command in Linux is used to change the password aging settings for a user. Password aging refers to setting restrictions on how long a user can keep their current password before being required to change it.

Here are some common options and their usage with the chage command:

chage -l [username]: This command is used to view the current password aging information for a specific user.

chage -M [max] [username]: This sets the maximum number of days during which the password is valid. After this period, the user will be forced to change their password.

chage -m [min] [username]: This sets the minimum number of days before a user can change their password again. This helps prevent users from changing their password too frequently.

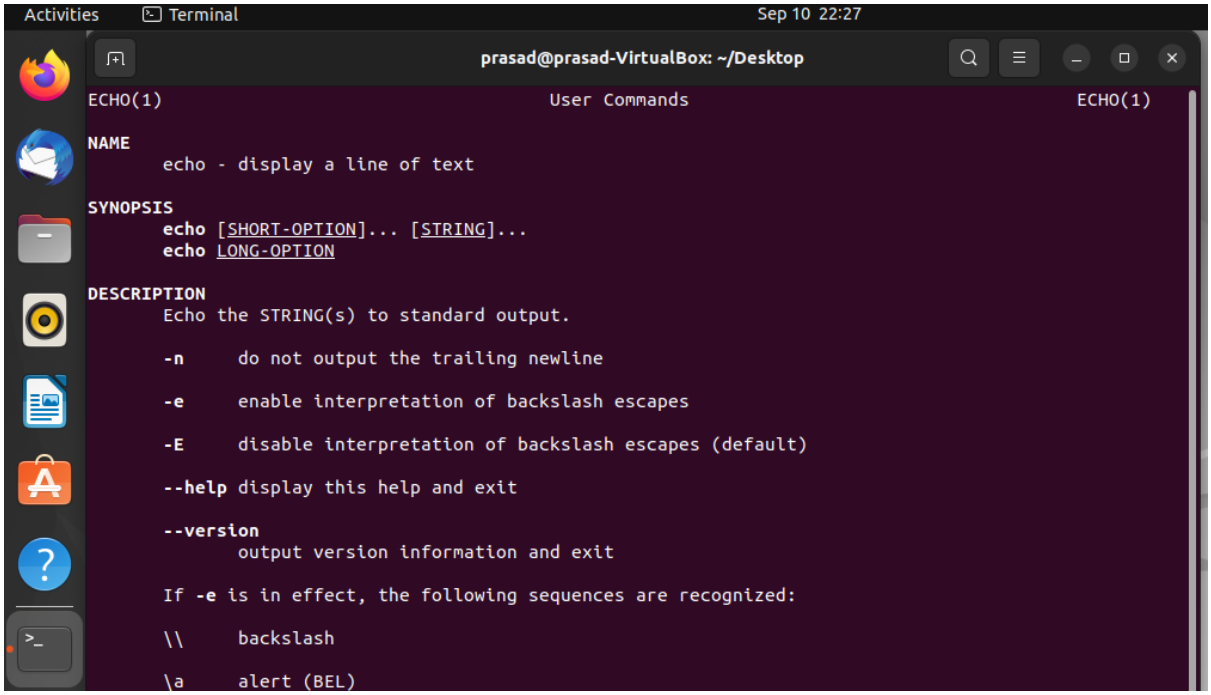
chage -d [lastday] [username]: This sets the date of the last password change.

3. Run the following commands in your system and give the output.

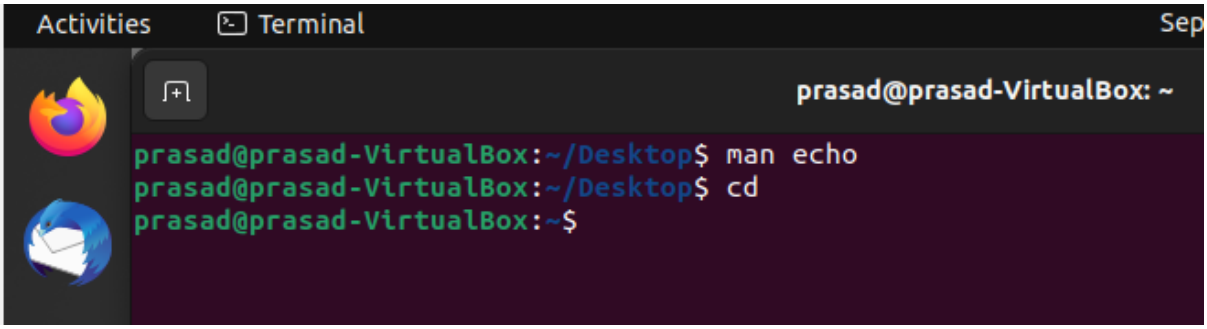
man, cd, mkdir, rmdir, echo, history, ls, pwd, cp, mv, touch, cat, who, w, cal, date.

Ans:

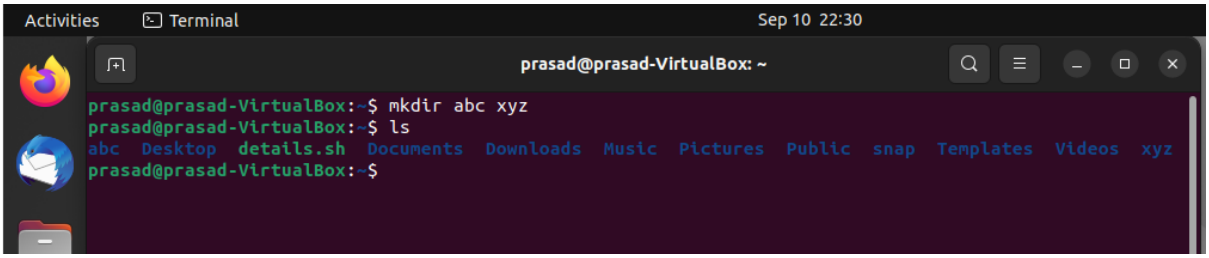
man:



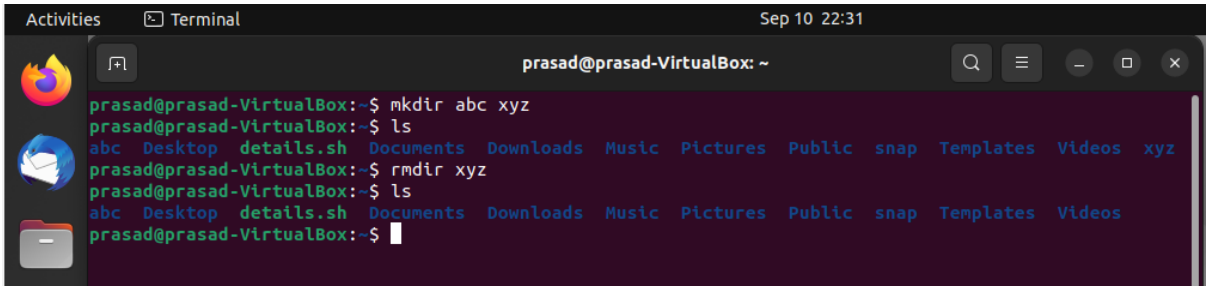
cd:



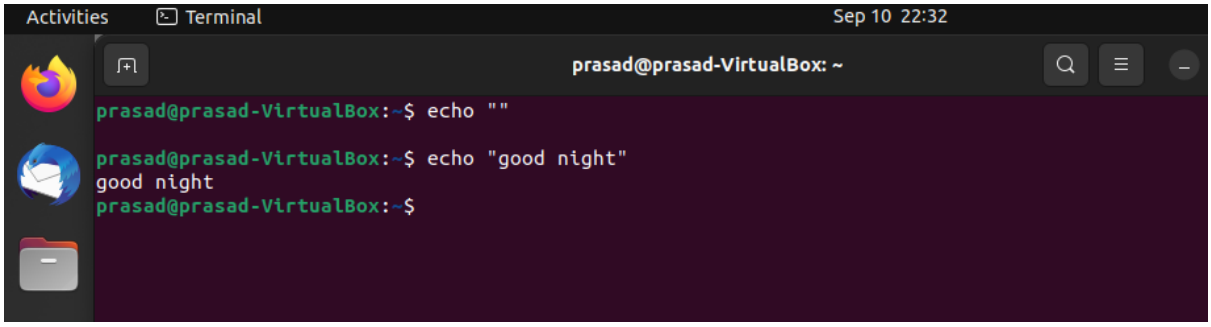
mkdir:



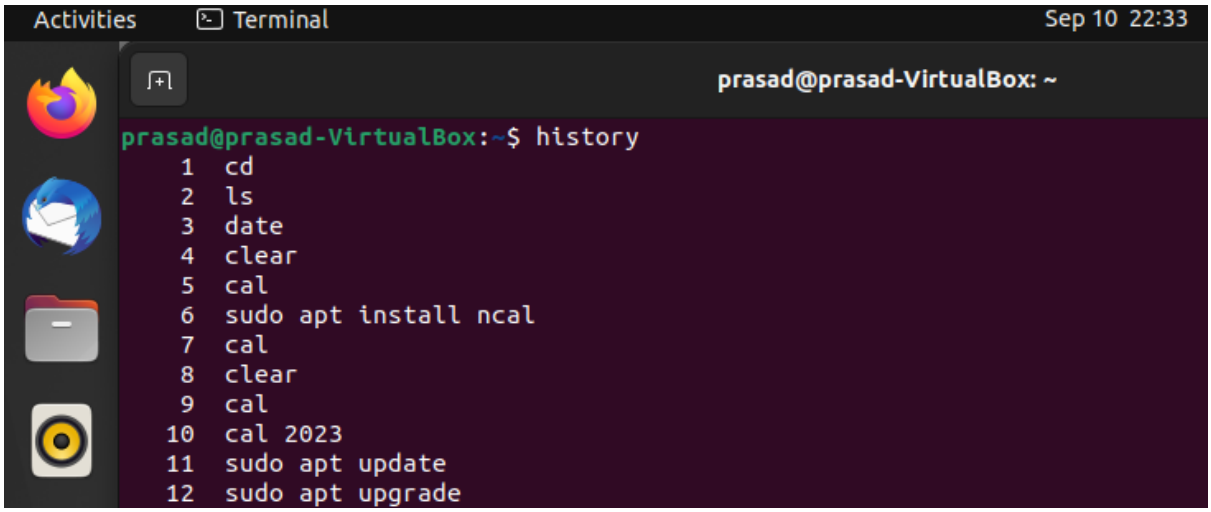
rmdir:



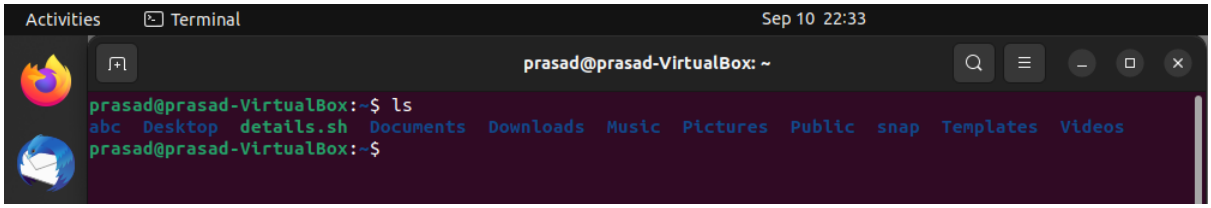
echo:



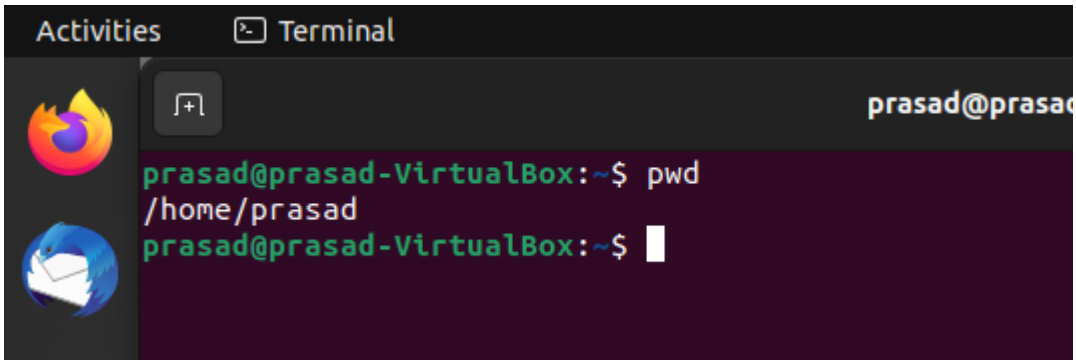
history:



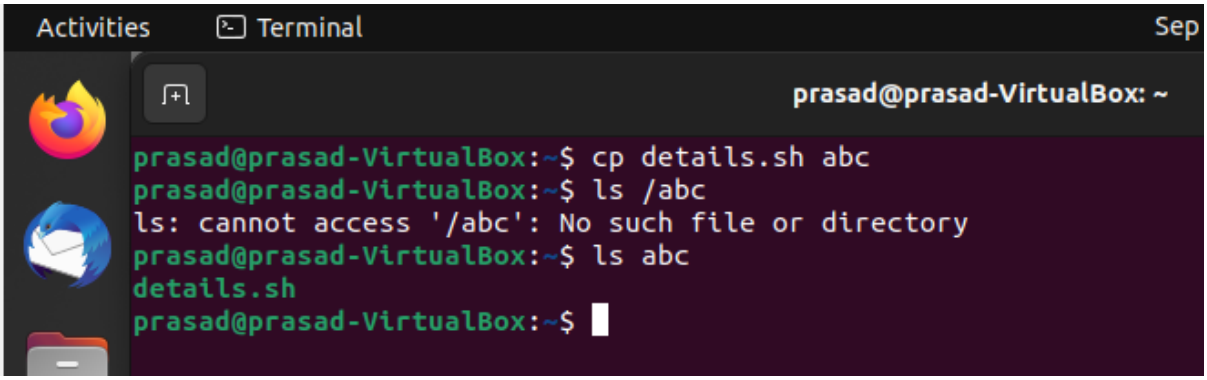
ls:



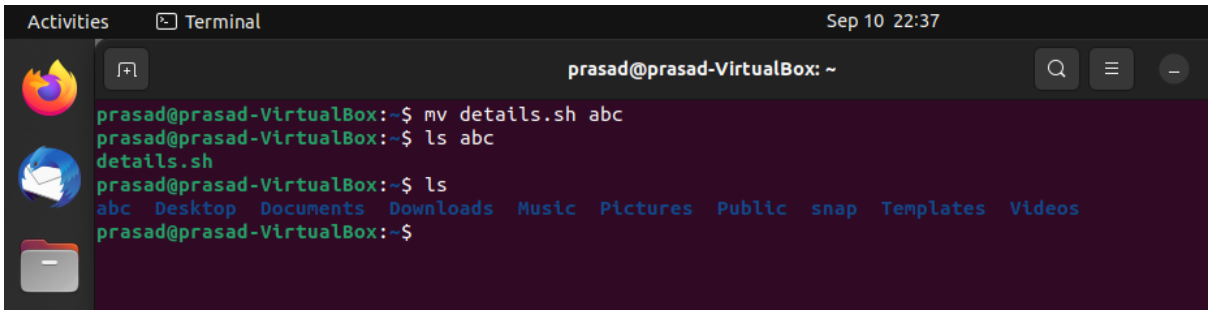
pwd:



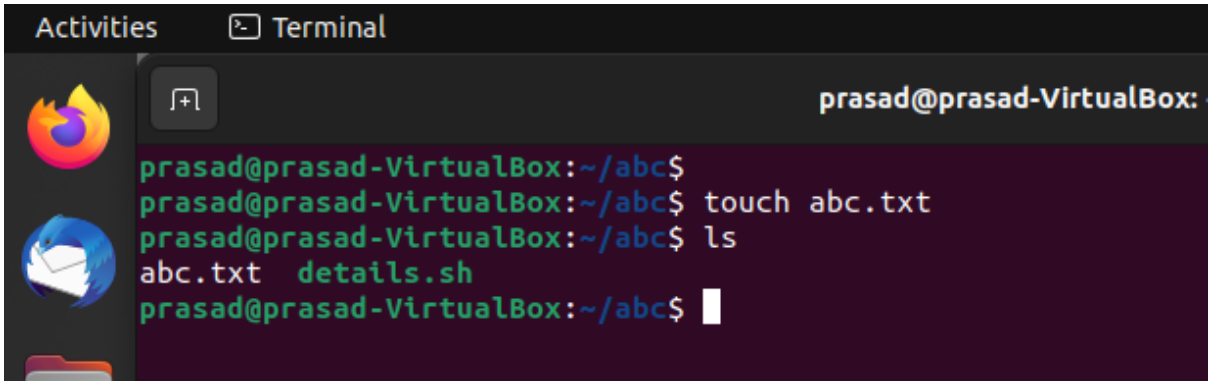
cp:



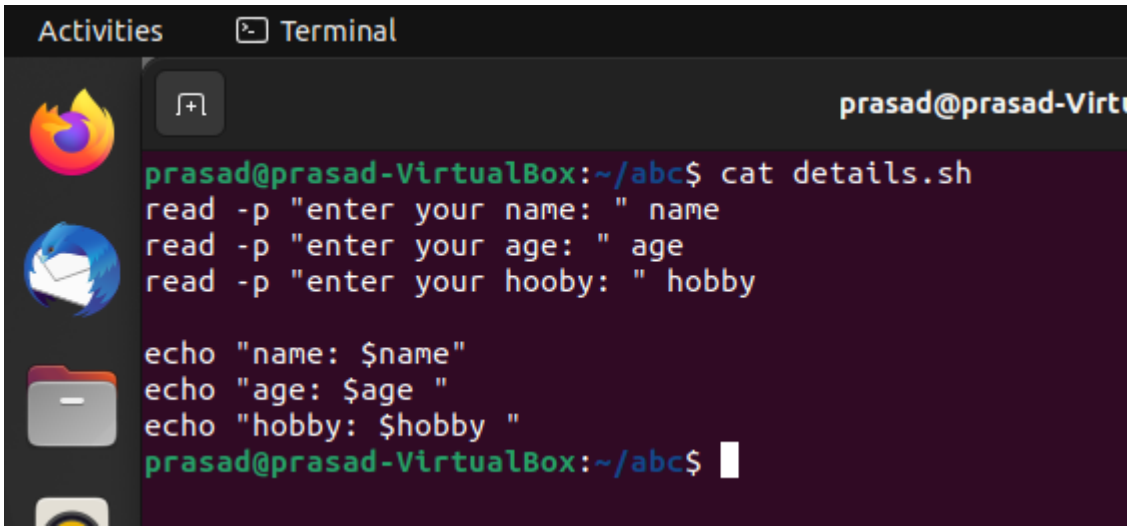
mv:



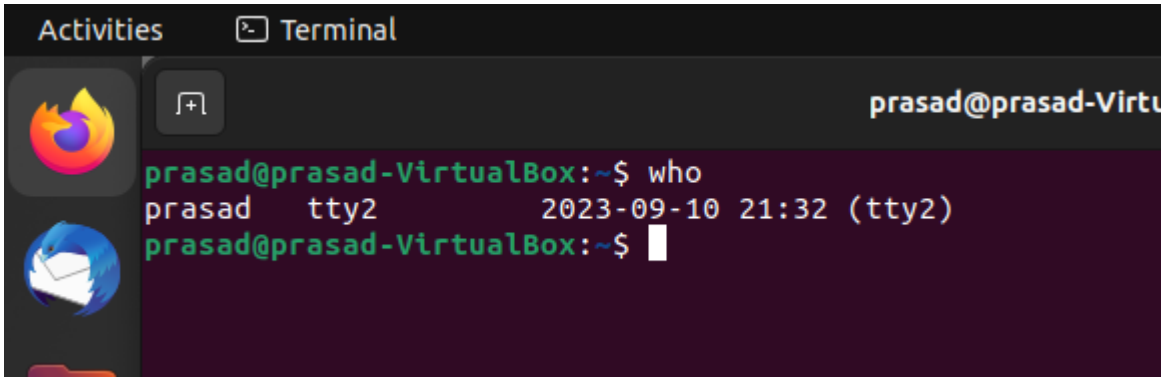
touch:



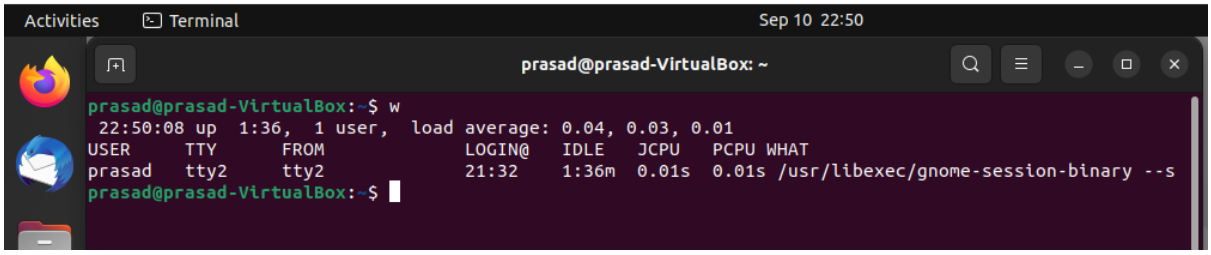
cat:


Activities
Terminal
prasad@prasad-Virtu
prasad@prasad-VirtualBox:~/abc$ cat details.sh
read -p "enter your name: " name
read -p "enter your age: " age
read -p "enter your hooby: " hobby
echo "name: $name"
echo "age: $age "
echo "hobby: $hobby "
prasad@prasad-VirtualBox:~/abc$

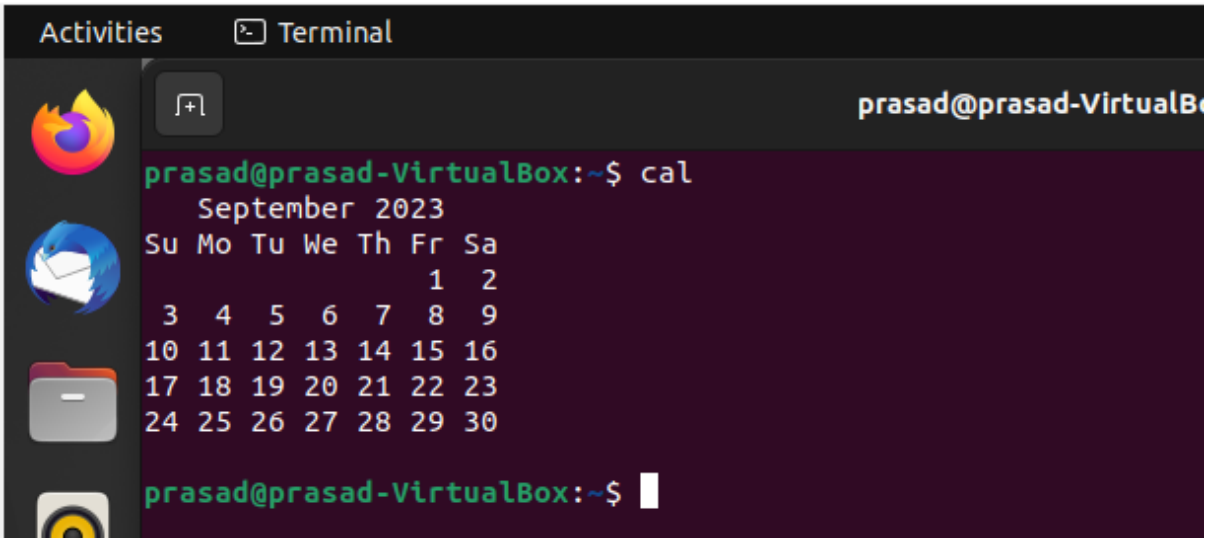
who:


Activities
Terminal
prasad@prasad-Virtu
prasad@prasad-VirtualBox:~$ who
prasad tty2 2023-09-10 21:32 (tty2)
prasad@prasad-VirtualBox:~$

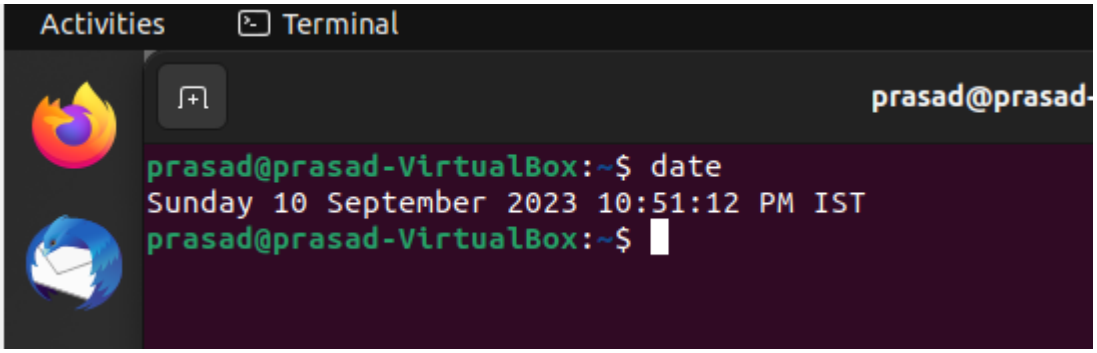
w:


Activities
Terminal
Sep 10 22:50
prasad@prasad-VirtualBox: ~
prasad@prasad-VirtualBox:~$ w
22:50:08 up 1:36, 1 user, load average: 0.04, 0.03, 0.01
USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT
prasad tty2 tty2 21:32 1:36m 0.01s 0.01s /usr/libexec/gnome-session-binary --s
prasad@prasad-VirtualBox:~$

cal:



date:



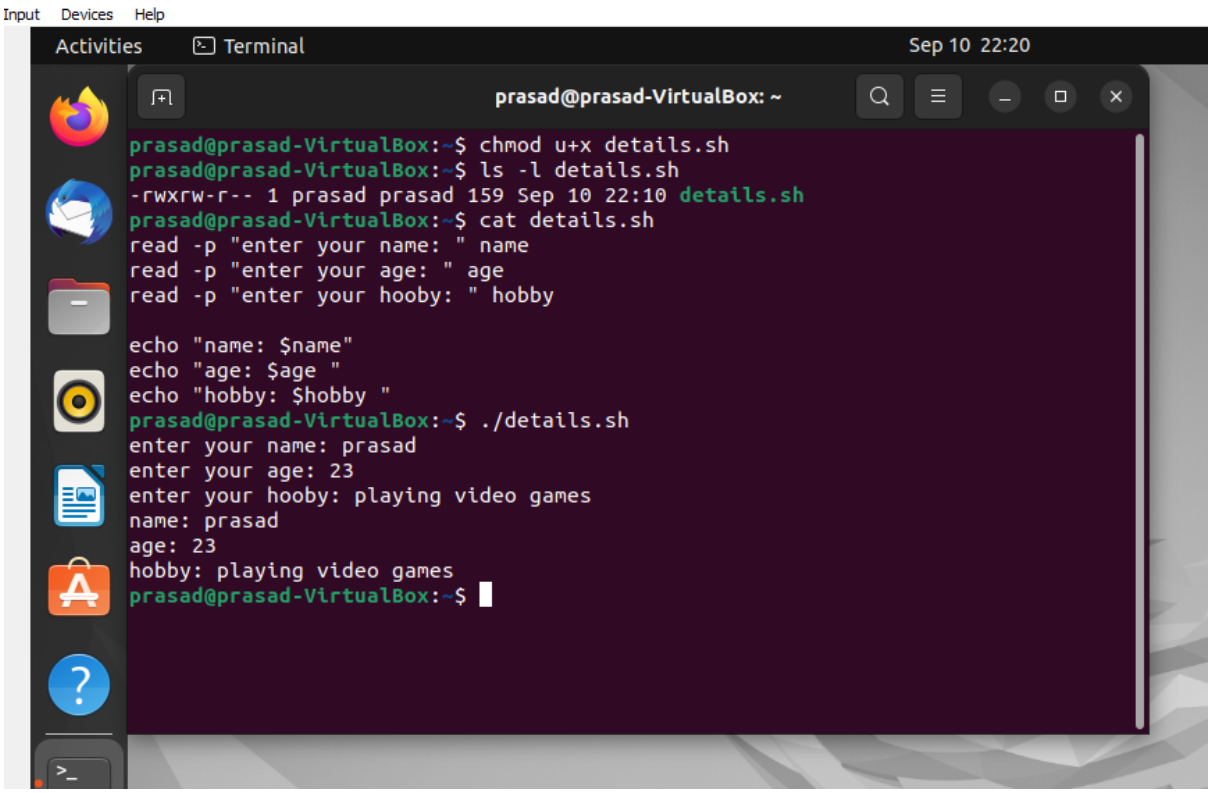
4. Write a shell program to display your details read hobby from keyboard.

Ans:

```
read -p "Enter your name: " name
read -p "Enter your age: " age
read -p "Enter your hobby: " hobby

echo "Name: $name"
echo "Age: $age"
echo "Hobby: $hobby"
```

output:



5. Explain about Linux file system.

Ans: The Linux file system is the structure in which files, directories, and other data are organized and managed on a Linux-based operating system. It is responsible for how data is stored, retrieved, and managed on a Linux system.

The Linux file system follows a hierarchical directory structure, also known as a tree structure. It starts from the root directory and branches out into subdirectories. The top-level directory in the Linux file system. Everything on the system is organized under the root directory.

A file's location in the file system is identified by its path. There are two types of paths:

Absolute Path: This starts from the root directory and specifies the full path to a file or directory e.g., /home/user/documents/file.txt.

Relative Path: This specifies the path of a file or directory relative to the current directory e.g., documents/file.txt.

Linux implements a file permission system to control who can read, write, and execute files and directories. These permissions are assigned to the owner, group, and others.