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1. What is shell?

Answer: Shell is an environment in which we can run our commands, programs, and shell scripts. There are different flavors of a shell, just as there are different flavors of operating systems. Each flavor of shell has its own set of recognized commands and functions. When a program finishes executing, it displays that program's output.

2. What is terminal?

Answer: Terminal is a program that opens a graphical window and lets you interact with the shell.

3. What is user friendly in between terminal and GUI & why?

Answer: GUI objects include icons, cursors, and buttons. These graphical elements are sometimes enhanced with sounds, or visual effects like transparency and drop shadows. A GUI is considered to be more user-friendly than a text-based command-line interface, such as MS-DOS, or the shell of Unix-like operating systems.

4. What defines a user account?

Answer: A user account is an identity created for a person in a computer or computing system.

5. What is root user?

Answer: The root is the user name or account that by default has access to all commands and files on a Linux or other Unix-like operating system.

6. What is general purpose user?

Answer: A general-purpose user is one that, given the appropriate application and required time, should be able to perform most common computing tasks.

7. What are the difference between root user and general purpose user?

Answer: The root user has maximum permissions and can do anything to the system. General users on Linux run with reduced permissions – for example, they can't install software or write to system directories.

8. What is the meaning of sudo?

Answer: Sudo is an abbreviation of "super user do" and is a Linux command that allows programs to be executed as a super user.

9. What is the meaning of su?

Answer: The Unix command su, which stands for substitute user, is used by a computer user to execute commands with the privileges of another user account.

10. Why we use sudo?

Answer: Whenever a user tries to install, remove or change any piece of software, he has to have the root privileges to perform such tasks. The sudo command is used to give such permissions to any particular command that a user wants to execute once the user enters a user password to give system based permissions.

11. Why we use su?

Answer: Su is one of the core utilities in Linux. It allows users to execute commands as another user. The most common use of the su is to get super user privileges. It is often mistaken as an abbreviation for "super user", but it is an abbreviation for "substitute user".

12. How to create a user account?

Answer: We need to use "sudo adduser oslab" command:

```
samiul@samiul-VirtualBox:~/Desktop$ sudo adduser samiul_alim
[sudo] password for samiul:
Adding user `samiul_alim' ...
Adding new group `samiul_alim' (1001) ...
Adding new user `samiul_alim' (1001) with group `samiul_alim' ...
Creating home directory `/home/samiul_alim' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for samiul_alim
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] Y
samiul@samiul-VirtualBox:~/Desktop$
```

13. How to delete a user?

Answer: We need to use "sudo deluser oslab" command:

```
samiul@samiul-VirtualBox:~$ cd Desktop
samiul@samiul-VirtualBox:~/Desktop$ sudo deluser samiul_alim
Removing user `samiul_alim' ...
Warning: group `samiul_alim' has no more members.
Done.
samiul@samiul-VirtualBox:~/Desktop$
```

14. How to login into a user account?

Answer: We need to use "sudo login oslab" command:

```
samiul@samiul-VirtualBox:~/Desktop$ sudo login samiul_alim
Password:
Welcome to Ubuntu 20.04.1 LTS (GNU/Linux 5.4.0-42-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

0 updates can be installed immediately.
0 of these updates are security updates.


The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Your Hardware Enablement Stack (HWE) is supported until April 2025.

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

samiul_alim@samiul-VirtualBox:~$
```

15. How to logout from a user account?

Answer: We need to use "logout" command:

```
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

samiul_alim@samiul-VirtualBox:~$ logout
samiul@samiul-VirtualBox:~/Desktop$
```

16. How many times it requires password for creating a user account?

Answer: We need to use password 3 times. 1st we need to use current user password and then we need to set password for new user where we use same password 2 times.

```
samiul@samiul-VirtualBox:~/Desktop$ man sudo root
samiul@samiul-VirtualBox:~/Desktop$ sudo adduser samiul_alim
[sudo] password for samiul:
Adding user `samiul_alim' ...
Adding new group `samiul_alim' (1001) ...
Adding new user `samiul_alim' (1001) with group `samiul_alim' ...
Creating home directory `/home/samiul_alim' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for samiul_alim
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] Y
```

17. How to exit from root?

Answer: We need to use "cd" command:

```
samiul@samiul-VirtualBox:~/Desktop$ cd
samiul@samiul-VirtualBox:~$ cd Desktop
samiul@samiul-VirtualBox:~/Desktop$
```

18. What is the meaning of sudo adduser {username}?

Answer: Sudo is a program for Unix-like computer operating systems that allows users to run programs with the security privileges of another user, by default the super user. Adduser command in Linux is used to add a new user to your current Linux machine. This command allows you to modify the configurations of the user which is to be created.

19. What is the meaning of deluser {username}?

Answer: "deluser" removes the user without removing the home directory, the mail spool or any other files on the system owned by the user.

20. What is the meaning of sudo su?

Answer: You will get a root shell by using this command. This command is essentially the same as just running "su" in the shell. Instead of telling the system to "switch users" directly, you're telling it to run the "su" command as root.