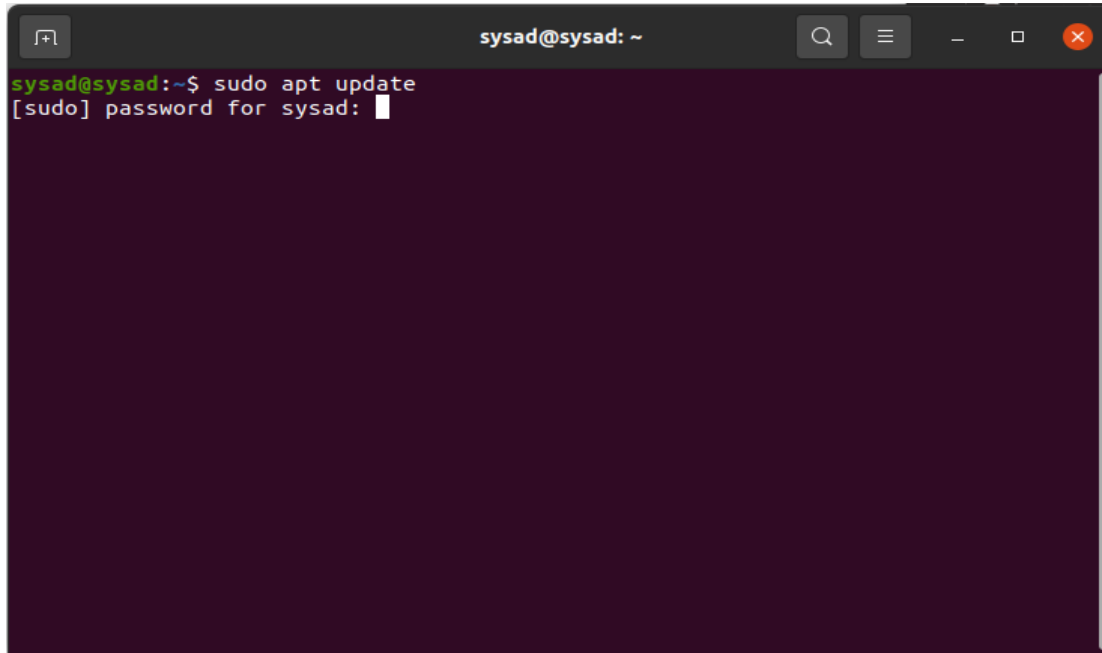


Mysql Installation guide

Step 1: Open the terminal and run the following command:

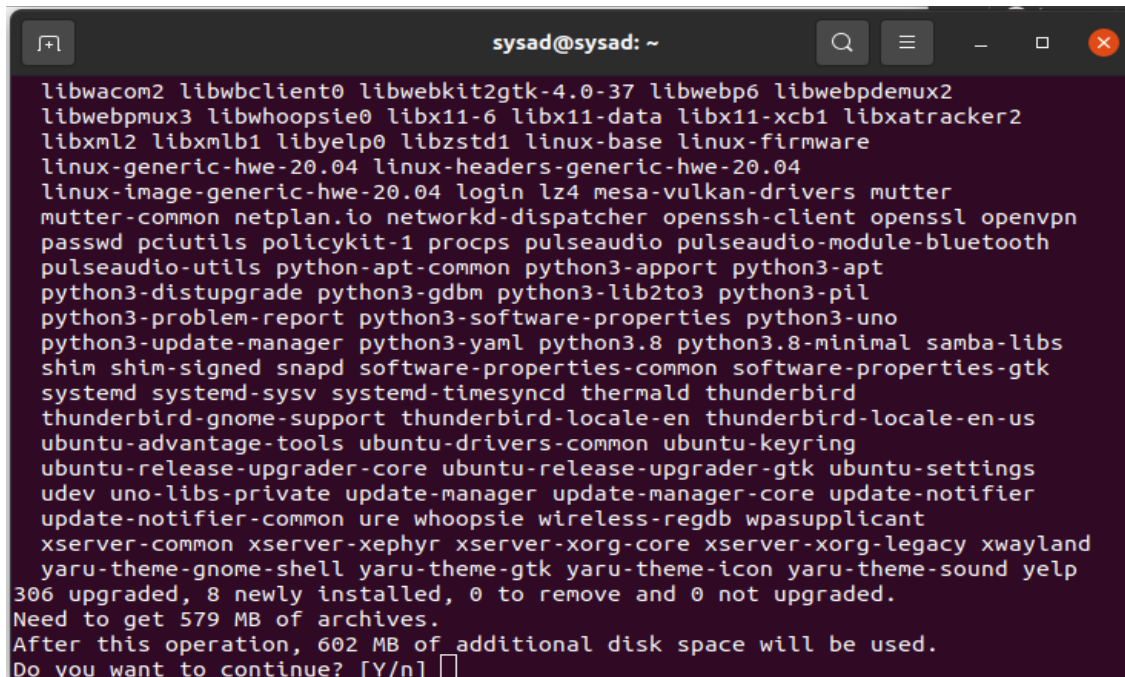
\$sudo apt update

A terminal window titled 'sysad@sysad: ~' with a search icon, menu icon, and window control buttons. The prompt is 'sysad@sysad:~\$' and the command 'sudo apt update' has been entered. The next line shows '[sudo] password for sysad:' followed by a cursor.

```
sysad@sysad:~$ sudo apt update
[sudo] password for sysad: 
```

Step 2: Next run upgrade.

\$sudo apt upgrade

A terminal window titled 'sysad@sysad: ~' with a search icon, menu icon, and window control buttons. The output of 'sudo apt upgrade' is displayed, listing various packages to be upgraded and the disk space requirements.

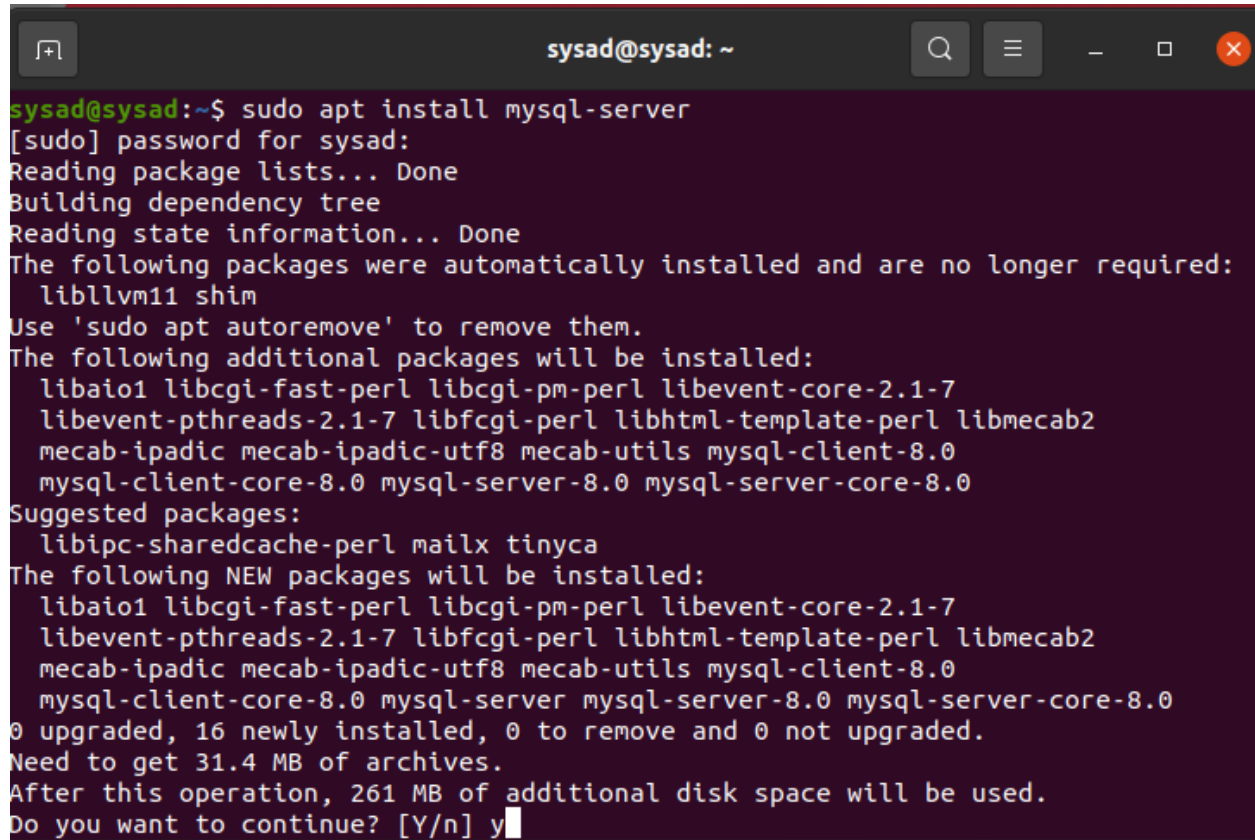
```
sysad@sysad:~$ sudo apt upgrade
libwacom2 libwbclient0 libwebkit2gtk-4.0-37 libwebp6 libwebpdemux2
libwebpmux3 libwhoopsie0 libx11-6 libx11-data libx11-xcb1 libxatracker2
libxml2 libxmlb1 libyelp0 libzstd1 linux-base linux-firmware
linux-generic-hwe-20.04 linux-headers-generic-hwe-20.04
linux-image-generic-hwe-20.04 login lz4 mesa-vulkan-drivers mutter
mutter-common netplan.io networkd-dispatcher openssh-client openssl openvpn
passwd pciutils policykit-1 procs pulseaudio pulseaudio-module-bluetooth
pulseaudio-utils python-apt-common python3-apport python3-apt
python3-distupgrade python3-gdbm python3-lib2to3 python3-pil
python3-problem-report python3-software-properties python3-uno
python3-update-manager python3-yaml python3.8 python3.8-minimal samba-libs
shim shim-signed snapd software-properties-common software-properties-gtk
systemd systemd-sysv systemd-timesyncd thermald thunderbird
thunderbird-gnome-support thunderbird-locale-en thunderbird-locale-en-us
ubuntu-advantage-tools ubuntu-drivers-common ubuntu-keyring
ubuntu-release-upgrader-core ubuntu-release-upgrader-gtk ubuntu-settings
udev uno-libs-private update-manager update-manager-core update-notifier
update-notifier-common ure whoopsie wireless-regdb wpasupplicant
xserver-common xserver-xephyr xserver-xorg-core xserver-xorg-legacy xwayland
yaru-theme-gnome-shell yaru-theme-gtk yaru-theme-icon yaru-theme-sound yelp
306 upgraded, 8 newly installed, 0 to remove and 0 not upgraded.
Need to get 579 MB of archives.
After this operation, 602 MB of additional disk space will be used.
Do you want to continue? [Y/n] 
```

MySQL Installation guide

Step 3: After successfully updating the package repository, install MySQL Server by running the following command:

\$sudo apt install mysql-server

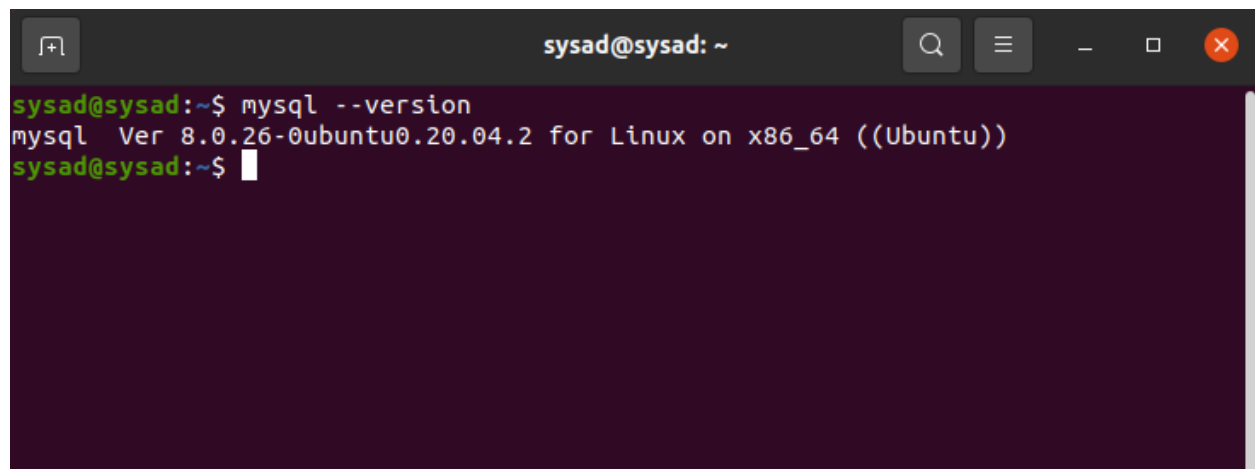
When asked if you want to continue with the installation, answer **Y** and hit **ENTER**.

A terminal window titled 'sysad@sysad: ~' showing the output of the command 'sudo apt install mysql-server'. The output includes package lists, dependency tree building, state information, and a list of additional packages to be installed. It also shows the disk space requirements and a confirmation prompt 'Do you want to continue? [Y/n] y' which has been answered 'y'.

```
sysad@sysad:~$ sudo apt install mysql-server
[sudo] password for sysad:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libllvm11 shim
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libevent-core-2.1-7
  libevent-pthreads-2.1-7 libfcgi-perl libhtml-template-perl libmecab2
  mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0
  mysql-client-core-8.0 mysql-server-8.0 mysql-server-core-8.0
Suggested packages:
  libipc-sharedcache-perl mailx tinyca
The following NEW packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libevent-core-2.1-7
  libevent-pthreads-2.1-7 libfcgi-perl libhtml-template-perl libmecab2
  mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0
  mysql-client-core-8.0 mysql-server mysql-server-8.0 mysql-server-core-8.0
0 upgraded, 16 newly installed, 0 to remove and 0 not upgraded.
Need to get 31.4 MB of archives.
After this operation, 261 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

Step 4: Check if MySQL was successfully installed by running:

\$mysql --version

A terminal window titled 'sysad@sysad: ~' showing the output of the command 'mysql --version'. The output displays the MySQL version and platform information: 'mysql Ver 8.0.26-0ubuntu0.20.04.2 for Linux on x86_64 ((Ubuntu))'.

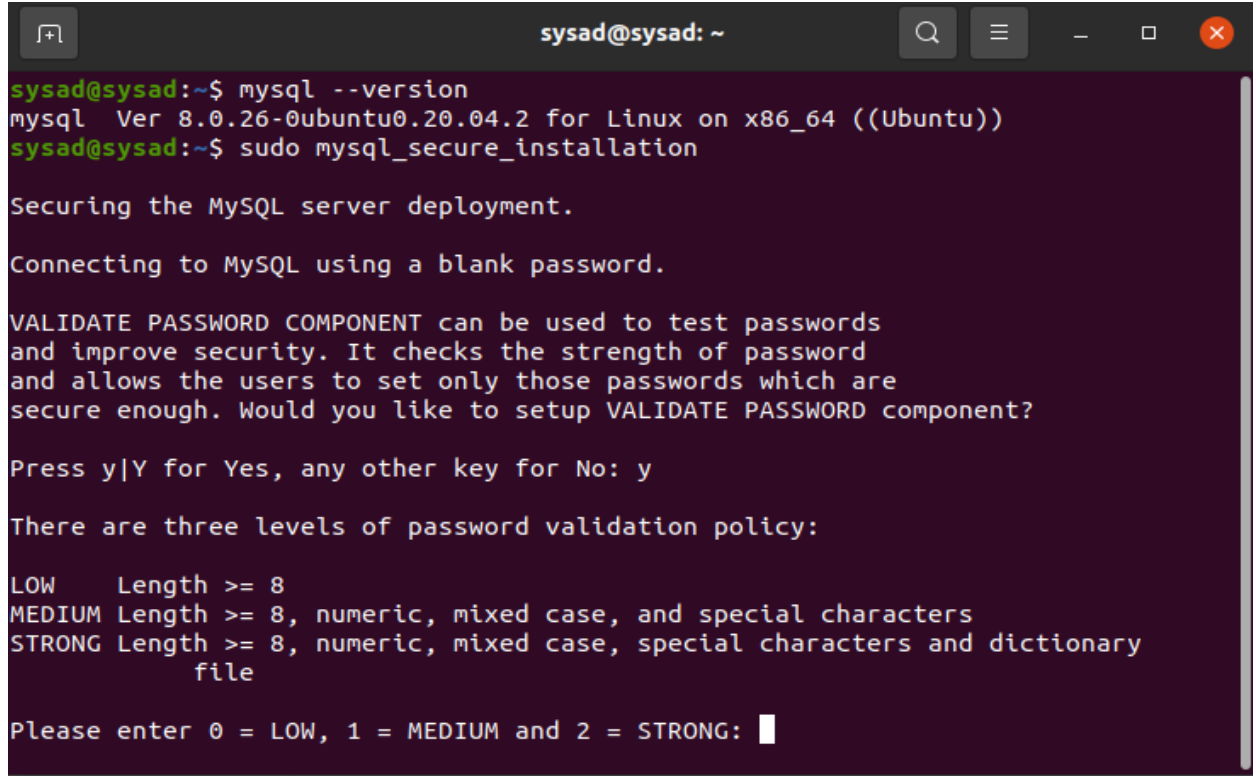
```
sysad@sysad:~$ mysql --version
mysql Ver 8.0.26-0ubuntu0.20.04.2 for Linux on x86_64 ((Ubuntu))
sysad@sysad:~$
```

Mysql Installation guide

Step 5: The MySQL instance on your machine is **insecure** immediately after installation.

1. Secure your MySQL user account with password authentication by running the included security script:

\$sudo mysql_secure_installation

A terminal window titled 'sysad@sysad: ~' showing the execution of the 'mysql_secure_installation' script. The script starts by displaying the MySQL version (8.0.26-0ubuntu0.20.04.2) and then prompts the user to secure the deployment. It asks if the user wants to use the 'VALIDATE PASSWORD COMPONENT' to test passwords and improve security. The user responds with 'y'. The script then lists three levels of password validation policy: LOW (length >= 8), MEDIUM (length >= 8, numeric, mixed case, and special characters), and STRONG (length >= 8, numeric, mixed case, special characters and dictionary file). The user is prompted to enter 0 for LOW, 1 for MEDIUM, or 2 for STRONG. The cursor is currently at the end of the prompt line.

```
sysad@sysad:~$ mysql --version
mysql Ver 8.0.26-0ubuntu0.20.04.2 for Linux on x86_64 ((Ubuntu))
sysad@sysad:~$ sudo mysql_secure_installation

Securing the MySQL server deployment.

Connecting to MySQL using a blank password.

VALIDATE PASSWORD COMPONENT can be used to test passwords
and improve security. It checks the strength of password
and allows the users to set only those passwords which are
secure enough. Would you like to setup VALIDATE PASSWORD component?

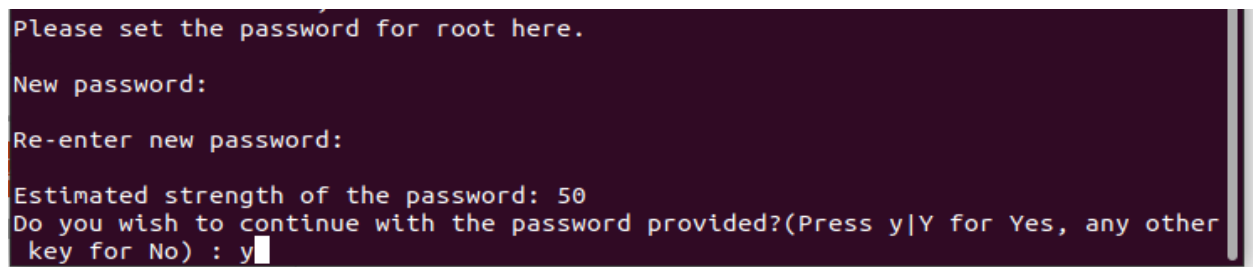
Press y|Y for Yes, any other key for No: y

There are three levels of password validation policy:

LOW      Length >= 8
MEDIUM  Length >= 8, numeric, mixed case, and special characters
STRONG  Length >= 8, numeric, mixed case, special characters and dictionary
        file

Please enter 0 = LOW, 1 = MEDIUM and 2 = STRONG: █
```

The program estimates the strength of your password and requires confirmation to continue. Press **Y** if you are happy with the password or any other key if you want a different one.

A terminal window showing the continuation of the 'mysql_secure_installation' script. It prompts the user to set a password for the root user. The user enters a new password, and the script prompts them to re-enter it. The script then displays the estimated strength of the password (50) and asks if the user wishes to continue with the provided password. The user responds with 'y'.

```
Please set the password for root here.

New password:

Re-enter new password:

Estimated strength of the password: 50
Do you wish to continue with the password provided?(Press y|Y for Yes, any other
key for No) : y█
```

Mysql Installation guide

Step 6: The script then prompts for the following security features:

- Remove anonymous users?
- Disallow root login remotely?
- Remove the test database and access to it?
- Reload privilege tables now?

The recommended answer to all these questions is **Y**. However, if you want a different setting for any reason, enter any other key.

```
Remove anonymous users? (Press y|Y for Yes, any other key for No) : y
Success.

Normally, root should only be allowed to connect from
'localhost'. This ensures that someone cannot guess at
the root password from the network.

Disallow root login remotely? (Press y|Y for Yes, any other key for No) : y
Success.

By default, MySQL comes with a database named 'test' that
anyone can access. This is also intended only for testing,
and should be removed before moving into a production
environment.

Remove test database and access to it? (Press y|Y for Yes, any other key for No) :
y
- Dropping test database...
Success.

- Removing privileges on test database...
Success.

Reloading the privilege tables will ensure that all changes
made so far will take effect immediately.

Reload privilege tables now? (Press y|Y for Yes, any other key for No) : y
Success.

All done!
sysad@sysad:~$
```

MySQL Installation guide

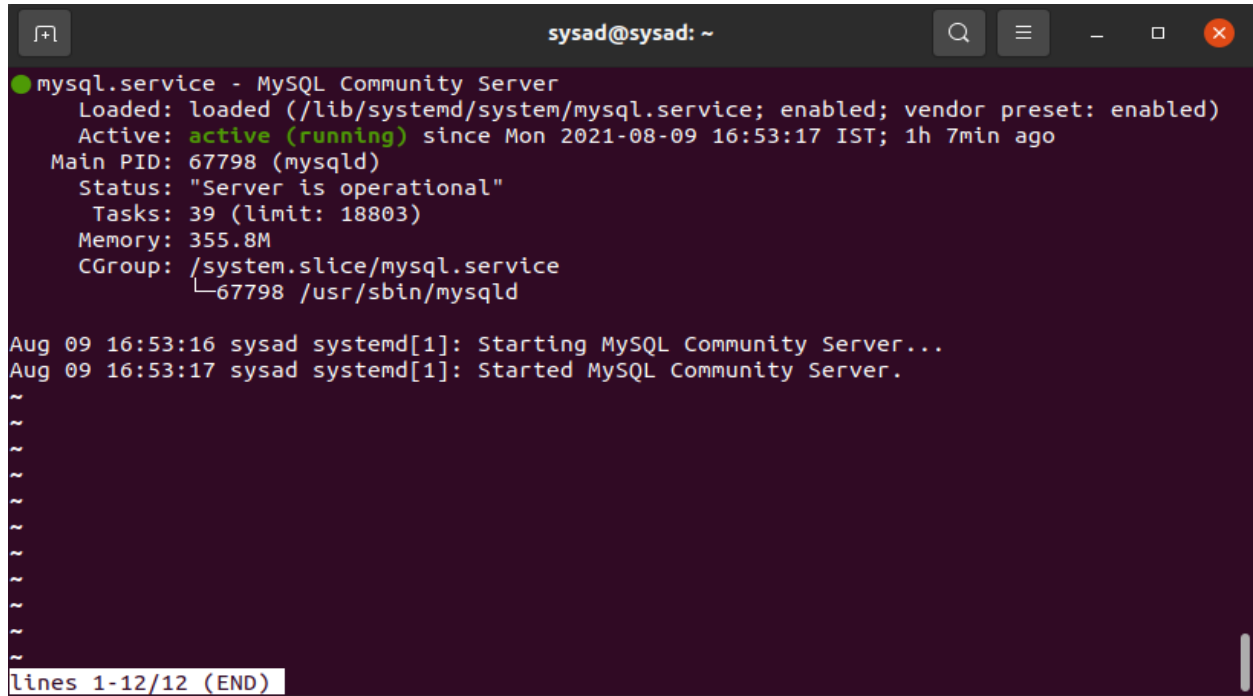
Step 7: Check if MySQL Service Is Running

Upon successfully installing MySQL, the MySQL service starts automatically.

Verify that the MySQL server is running by running:

\$sudo systemctl status mysql

The output should show that the service is operational and running:

A terminal window titled 'sysad@sysad: ~' showing the output of the command 'sudo systemctl status mysql'. The output indicates that the 'mysql.service' is loaded, enabled, and active (running) since Mon 2021-08-09 16:53:17 IST. It shows the main PID as 67798 (mysqld) and the status as 'Server is operational'. Below this, it shows the tasks, memory usage, and cgroup information. At the bottom, it shows the log messages for starting the MySQL Community Server.

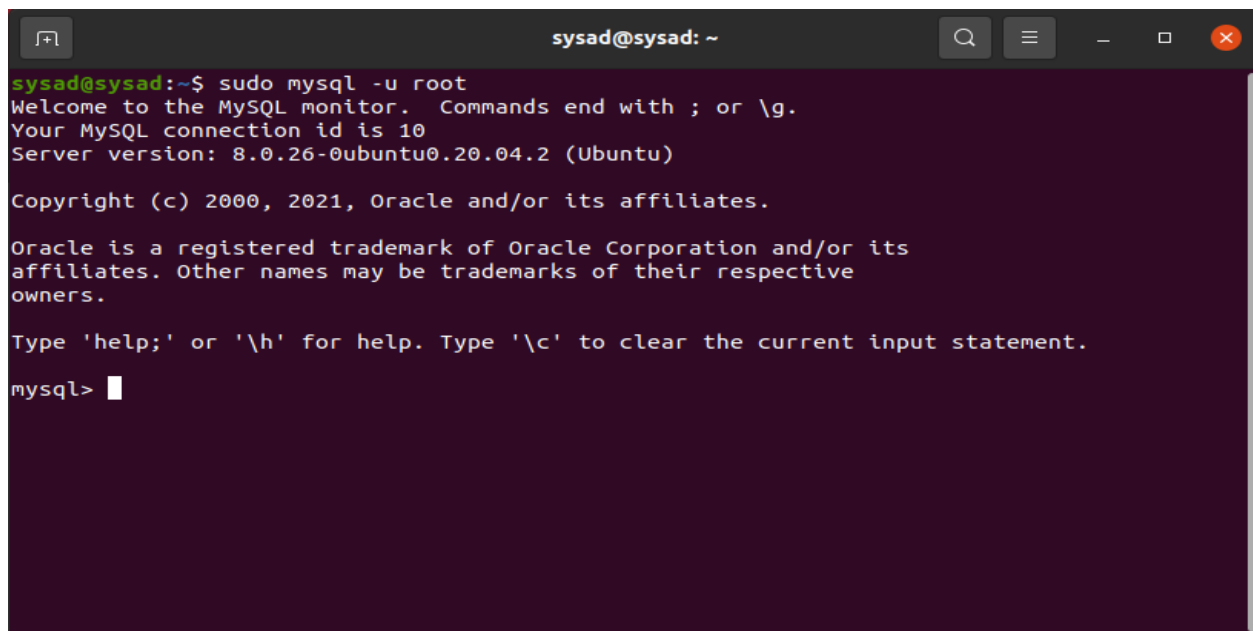
```
mysql.service - MySQL Community Server
Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor preset: enabled)
Active: active (running) since Mon 2021-08-09 16:53:17 IST; 1h 7min ago
Main PID: 67798 (mysqld)
Status: "Server is operational"
Tasks: 39 (limit: 18803)
Memory: 355.8M
CGroup: /system.slice/mysql.service
└─67798 /usr/sbin/mysqld

Aug 09 16:53:16 sysad systemd[1]: Starting MySQL Community Server...
Aug 09 16:53:17 sysad systemd[1]: Started MySQL Community Server.
~
~
~
~
~
~
~
~
~
lines 1-12/12 (END)
```

Step 8: Log in to MySQL Server

Finally, to log in to the MySQL interface, run the following command:

\$sudo mysql -u root

A terminal window titled 'sysad@sysad: ~' showing the output of the command 'sudo mysql -u root'. The output shows the MySQL monitor welcome message, connection ID, server version, and copyright information. It also shows the prompt 'mysql>' with a cursor.

```
sysad@sysad:~$ sudo mysql -u root
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 10
Server version: 8.0.26-0ubuntu0.20.04.2 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> █
```