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Project Name: Softwares installation.

## Java Installation on Ubuntu Machine:

1. Created an EC2 Instance with Ubuntu image and switch to root user using `sudo su -` command.
2. Updated the instance by using the `(apt-get update -y)` command
3. Installed JRE Package by using the `(apt-get install default-jre -y)` command.
4. Installed JDK Package by using the `(apt-get install default-jdk -y)` command.
5. Checked Java Version.

```
root@ip-172-31-87-146:~# java -version
openjdk version "11.0.15" 2022-04-19
OpenJDK Runtime Environment (build 11.0.15+10-Ubuntu-0ubuntu0.20.04.1)
OpenJDK 64-Bit Server VM (build 11.0.15+10-Ubuntu-0ubuntu0.20.04.1, mixed mode, sharing)
```

6. Listed the JVM by using the `(ls /usr/lib/jvm/)`
7. Installed the vim package by using the `(apt install vim -y)`
8. Wrote the script on the `/etc/profile.d/jdk11.sh`

```
export JAVA_HOME="/usr/lib/jvm/jdk-11.0.10"
export PATH="$PATH:${JAVA_HOME}/bin"
```

- 9.
10. I have run the script to print the Java\_Home and Path

```
root@ip-172-31-87-146:~# echo $JAVA_HOME
/usr/lib/jvm/jdk-11.0.15
```

```
root@ip-172-31-87-146:~# echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/usr/lib/jvm/jdk-11.0.15/bin
```

Basic Program Run:

```
root@ip-172-31-87-146:~# cat HelloWorld.java
// This is a simple Java program.
// FileName : "HelloWorld.java".

class HelloWorld
{
    // Your program begins with a call to main().
    // Prints "Hello, World" to the terminal window.
    public static void main(String args[])
    {
        System.out.println("Hello, World");
    }
}
```

Java Program Compile:

```
root@ip-172-31-87-146:~# javac HelloWorld.java
root@ip-172-31-87-146:~#
```

Java Program Execute:

```
root@ip-172-31-87-146:~# java HelloWorld
Hello, World
```

## **PYTHON INSTALLATION ON UBUNTU:**

1. Updated the Packages on the Ubuntu Machine by running the (apt-get update -y) command.
2. Installed Python by running the (apt-get install python3 -y) command.
3. Installed Python version 3.8 by running the (apt-get install python3.8 -y) command.
4. Python3 will take to space where we can write our code.
5. Executed code

```
root@ip-172-31-87-146:~# python3
Python 3.8.10 (default, Jun 22 2022, 20:18:18)
[GCC 9.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> print ('Hello world')
Hello world
```

6. Hello world
7. exit() to come out from python3

## **NODEJS INSTALLATION ON UBUNTU:**

1. Installed nodejs by running the ( apt install nodejs -y ) command.
2. Checked version after the installation of nodejs by running the (node -v) command.

```
root@ip-172-31-87-146:~# node -v
v10.19.0
```

3. Nodejs is successfully installed and entered into nodejs to run the program by using the (nodejs) command.

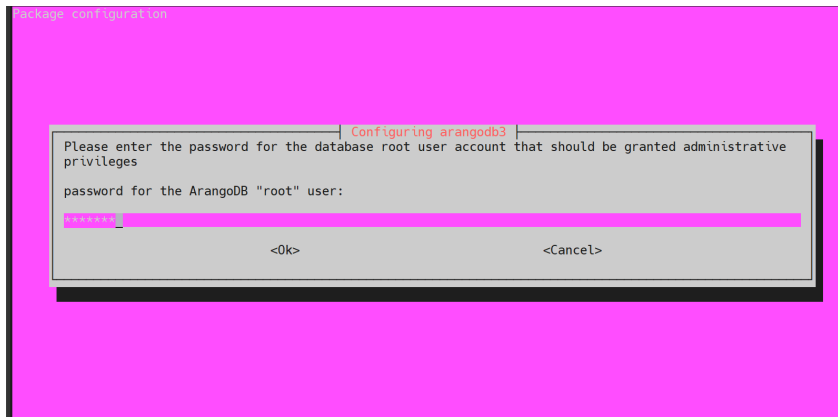
```
root@ip-172-31-26-175:~# nodejs
>
```

4. Exited from nodejs by using the ( .exit ) command.

```
root@ip-172-31-87-146:~# nodejs
> .exit
```

## **ARANGO INSTALLATION ON UBUNTU:**

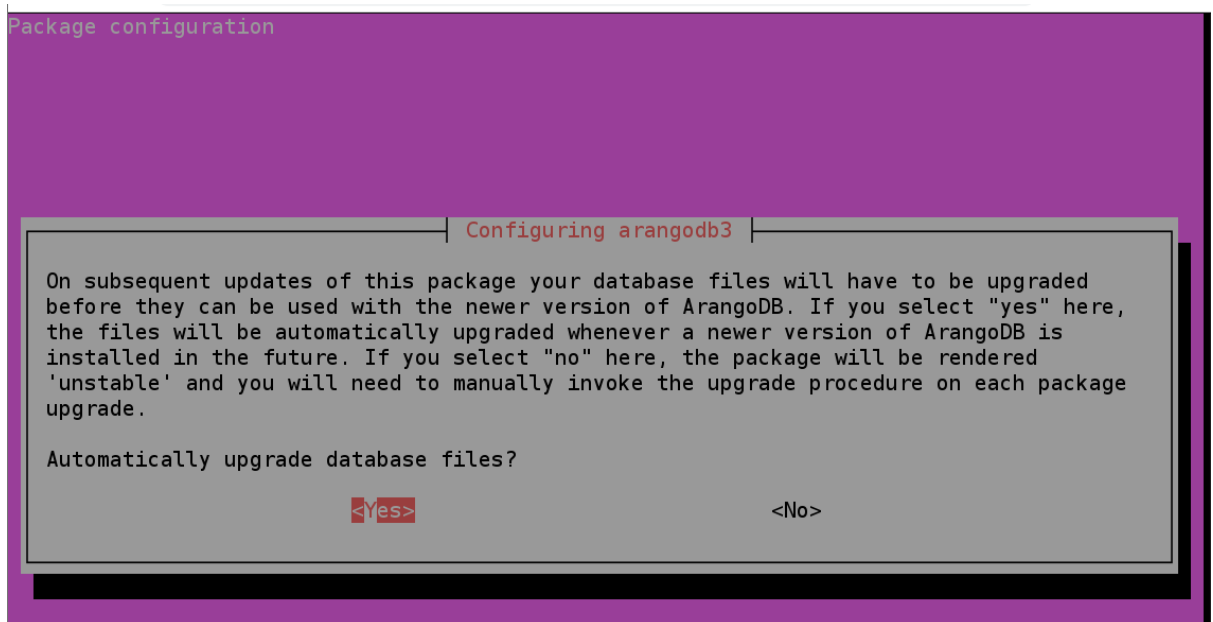
1. First add the repository key to apt like this:
2. `wget -q https://download.arangodb.com/arangodb39/DEBIAN/Release.key`
3. `sudo apt-key add - < Release.key`
4. Use apt-get to install arangodb:
5. By running the ( `echo 'deb https://download.arangodb.com/arangodb39/DEBIAN/ /' | sudo tee /etc/apt/sources.list.d/arangodb.list` ) command
6. Update the package by running the ( `apt update -y` ) command.
7. Run the ( `sudo apt-get install apt-transport-https` )
8. By running the ( `apt-get install arangodb3` ) command.
9. Below pop-up will show after running the ( `apt -get install arangodb3` ) command. Here I have set up the password for the root user.



10. It will pop the screen to repeat the password for the root user.



11. Automatically Upgrade Database files



12. I have restarted the arangodb by running the (systemctl start arangodb3) command.

13. Checked the status of the arangodb. It is actively running.

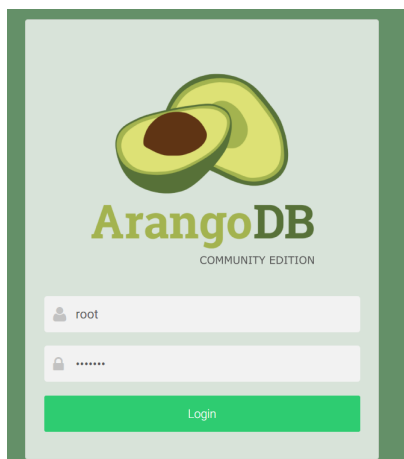
14. Ran arangosh, below is the pop-up to enter to arango shell

```
root@ip-172-31-87-146:~# arangosh
Please specify a password:

arangosh
arangosh (ArangoDB 3.9.2 [linux] 64bit, using jemalloc, build tags/v3.9.2-0-g8bf70c5f5b6, VPack 0.1.35, RocksDB 6
27.0, ICU 64.2, V8 7.9.317, OpenSSL 1.1.1o  3 May 2022)
Copyright (c) ArangoDB GmbH

Command-line history will be persisted when the shell is exited. You can use '--console.history false' to turn th
s off
Connected to ArangoDB 'http+tcp://127.0.0.1:8529, version: 3.9.2 [SINGLE, server], database: '_system', username:
'root'
Type 'tutorial' for a tutorial or 'help' to see common examples
```

15. Created the New Database by running ( `db._createDatabase("muralidb");` );
16. Checked how many databases are there in arangodb by running the ( `db._databases()` ) command. Exit to exit from that
17. Ran ( `vim /etc/arangodb3/arangod.conf` ) command, on arangodb configuration file added Private address.
18. Restarted the arangodb3 by running the ( `systemctl restart arangodb3` ) command.
19. Checked the arangodb3 status by running the ( `systemctl status arangodb3` ) command.
20. Take the public IP address and used port 8529 to launch the arango db and used the root as a username and password which was provided earlier while installing the arango db.



21. After successfully logging into the arangodb it has asked me which database I have to choose. After choosing the System Database on the dashboard below status showing.

## PERCONA MYSQL INSTALLATION ON UBUNTU:

1. Install GnuPG, the GNU Privacy Guard ( `apt install gnupg2` ) command.
2. Fetch the repository packages from Percona web ( `wget`   
 `https://repo.percona.com/apt/percona-release_latest.${lsb_release -sc}_all.deb` ) command.

```
root@ip-172-31-87-146:~# wget https://repo.percona.com/apt/percona-release_latest.${lsb_release -sc}_all.deb
--2022-07-19 08:56:44-- https://repo.percona.com/apt/percona-release_latest.focal_all.deb
Resolving repo.percona.com (repo.percona.com)... 147.135.54.159
Connecting to repo.percona.com (repo.percona.com)|147.135.54.159|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 11804 (12K) [application/x-debian-package]
Saving to: 'percona-release_latest.focal_all.deb'

percona-release_latest.focal_all. 100%[=====] 11.53K --.-KB/s in 0s
2022-07-19 08:56:44 (241 MB/s) - 'percona-release_latest.focal_all.deb' saved [11804/11804]
```

3. Install the downloaded package with `dpkg`. To do that, I have run the following commands as `root` ( `dpkg -i percona-release_latest.${lsb_release -sc}_all.deb` )

```
root@ip-172-31-87-146:~# dpkg -i percona-release_latest.${lsb_release -sc}_all.deb
Selecting previously unselected package percona-release.
(Reading database ... 67377 files and directories currently installed.)
Preparing to unpack percona-release_latest.focal_all.deb ...
Unpacking percona-release (1.0-27.generic) ...
Setting up percona-release (1.0-27.generic) ...
* Enabling the Percona Original repository
<*> All done!
==> Please run "apt-get update" to apply changes
* Enabling the Percona Release repository
<*> All done!
==> Please run "apt-get update" to apply changes
The percona-release package now contains a percona-release script that can enable additional repositories for our newer products.

For example, to enable the Percona Server 8.0 repository use:

    percona-release setup ps80

Note: To avoid conflicts with older product versions, the percona-release setup command may disable our original repository for some products.

For more information, please visit:
https://www.percona.com/doc/percona-repo-config/percona-release.html
```

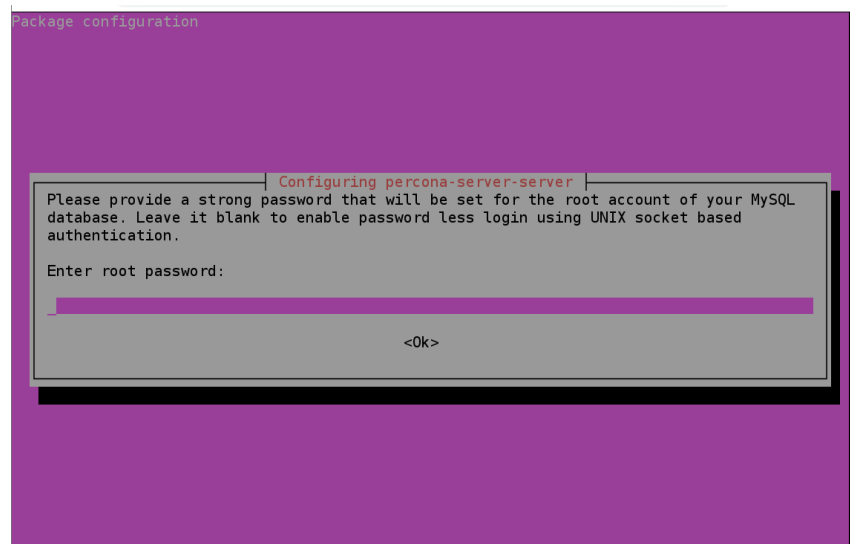
4. Ran `percona-release setup ps80` for enabling the percona server 8.0 Repositories

```

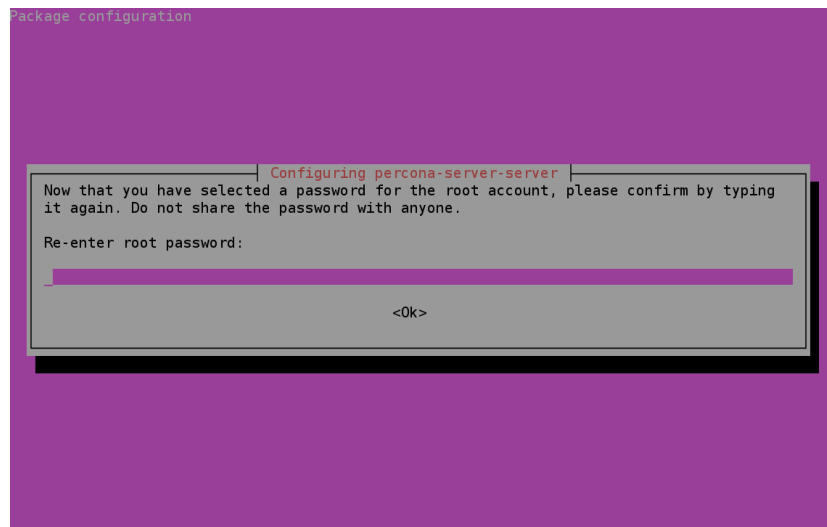
root@ip-172-31-87-146:~# percona-release setup ps80
* Disabling all Percona Repositories
* Enabling the Percona Server 8.0 repository
* Enabling the Percona Tools repository
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:4 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Ign:5 https://download.arangodb.com/arangodb39/DEBIAN InRelease
Get:6 http://repo.percona.com/prel/apt focal InRelease [9779 B]
Hit:7 https://download.arangodb.com/arangodb39/DEBIAN Release
Get:8 http://repo.percona.com/ps-80/apt focal InRelease [15.8 kB]
Get:9 http://repo.percona.com/tools/apt focal InRelease [15.8 kB]
Get:10 http://repo.percona.com/prel/apt focal/main amd64 Packages [851 B]
Get:12 http://repo.percona.com/ps-80/apt focal/main Sources [3036 B]
Get:13 http://repo.percona.com/ps-80/apt focal/main amd64 Packages [34.6 kB]
Get:14 http://repo.percona.com/tools/apt focal/main Sources [10.0 kB]
Get:15 http://repo.percona.com/tools/apt focal/main amd64 Packages [21.9 kB]
Fetched 448 kB in 1s (452 kB/s)
Reading package lists... Done

```

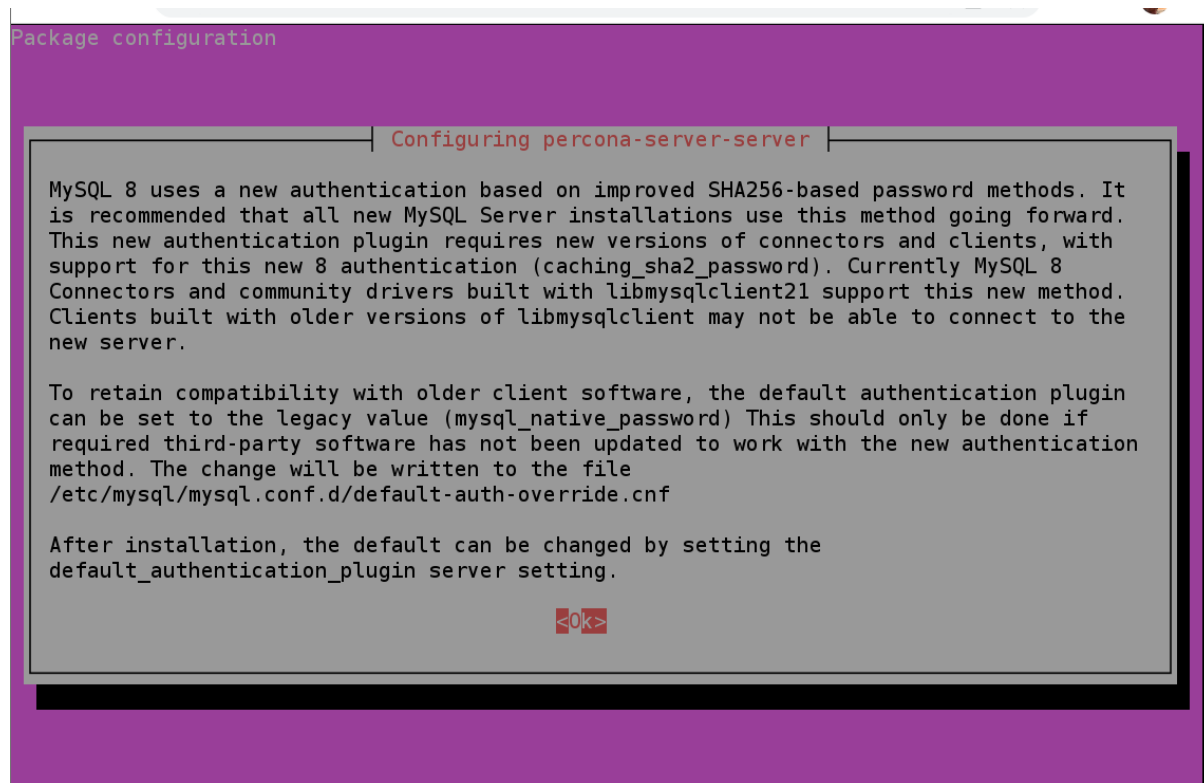
5. Installed Percona by running ( apt install percona-server-server ) command and the pop-up is shown below to set up the password for the root user.



6. Re-enter the password for the root user

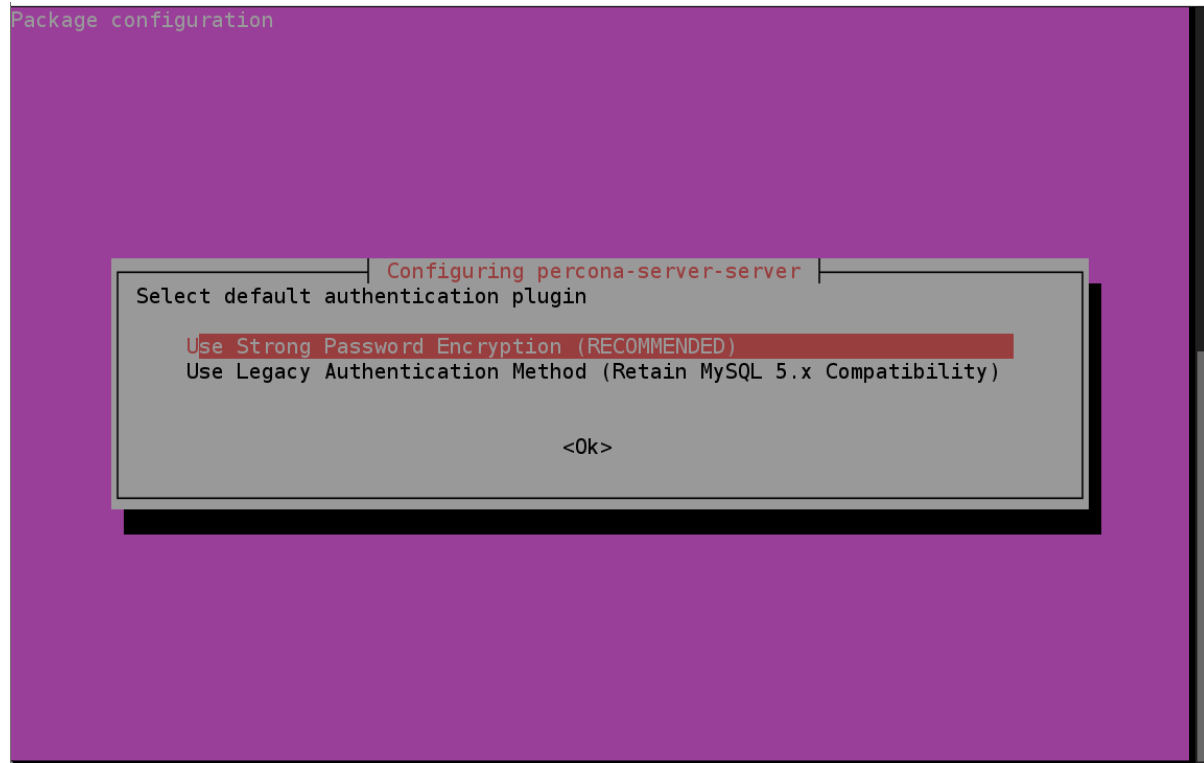


## 7. Configuring Percona Server



## 8. Setup default authentication plugin as use strong password encryption





9. Ran `mysql -u root -p` command to enter into the database shell, it will ask the password which was configured while installing the percona server, we have to enter the password to go percona server.
10. Created Database and checked how many databases are there. Delete the database and exited.

### **MONGO DB INSTALLATION ON UBUNTU:**

1. Mongodb is part of the ubuntu repositories we no longer need to get the resources from the internet.
2. Installed mongodb by running `(apt install -y mongodb)` command.
3. By running the `( apt update -y )` it will update the mongodb repositories.
4. We start mongodb services by running the `( service mongodb start )` command.
5. Checked mongodb status by running the `( service mongodb status )` command.

```

root@ip-172-31-87-146:~# service mongod status
● mongod.service - An object/document-oriented database
   Loaded: loaded (/lib/systemd/system/mongod.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2022-07-19 09:02:27 UTC; 55s ago
     Docs: man:mongod(1)
    Main PID: 4663 (mongod)
      Tasks: 23 (limit: 1145)
     Memory: 44.1M
    CGroup: /system.slice/mongod.service
            └─4663 /usr/bin/mongod --unixSocketPrefix=/run/mongod --config /etc/mongod.conf

Jul 19 09:02:27 ip-172-31-87-146 systemd[1]: Started An object/document-oriented database.
root@ip-172-31-87-146:~#

```

6. Upon running the mongo command it will open the mongo shell

```

root@ip-172-31-87-146:~# mongo
MongoDB shell version v3.6.8
connecting to: mongodb://127.0.0.1:27017
Implicit session: session { "id" : UUID("fb9ab3ce-a14f-40fd-a9d7-dd5df9981025") }
MongoDB server version: 3.6.8
Welcome to the MongoDB shell.
For interactive help, type "help".
For more comprehensive documentation, see
  http://docs.mongodb.org/
Questions? Try the support group
  http://groups.google.com/group/mongodb-user

Server has startup warnings:
2022-07-19T09:02:27.487+0000 I STORAGE [initandlisten]
2022-07-19T09:02:27.487+0000 I STORAGE [initandlisten] ** WARNING: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine
2022-07-19T09:02:27.487+0000 I STORAGE [initandlisten] ** See http://dochub.mongodb.org/core/prodnotes-filesystem
2022-07-19T09:02:28.965+0000 I CONTROL [initandlisten]
2022-07-19T09:02:28.965+0000 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the database.
2022-07-19T09:02:28.965+0000 I CONTROL [initandlisten] ** Read and write access to data and configuration is unrestricted.
2022-07-19T09:02:28.965+0000 I CONTROL [initandlisten]
>

```

7. show dbs; it will show the databases present in the mongod

```

> show dbs;
admin    0.000GB
config  0.000GB
local    0.000GB

```

8. Created new database by using ( use mohandb; ) command.
9. To check on which database we are in we can use ( db; ) command.
10. To Exit from the mongod shell we can use ( exit ) command.

```

> exit
bye

```