MYSQL- DOCKER

To start mysql as container, open interactive terminal in it, create a sample table.

# docker run --name mydb -d -e MYSQL\_ROOT\_PASSWORD=sunil mysql:5

# docker container ls

I want to open bash terminal of mysql

# docker exec -it mydb bash

To connect to mysql database

# mysql -u root -p

enter the password, we get mysql prompt

TO see list of databases

> show databases;

TO switch to a databse

> use db\_name

> use mysql

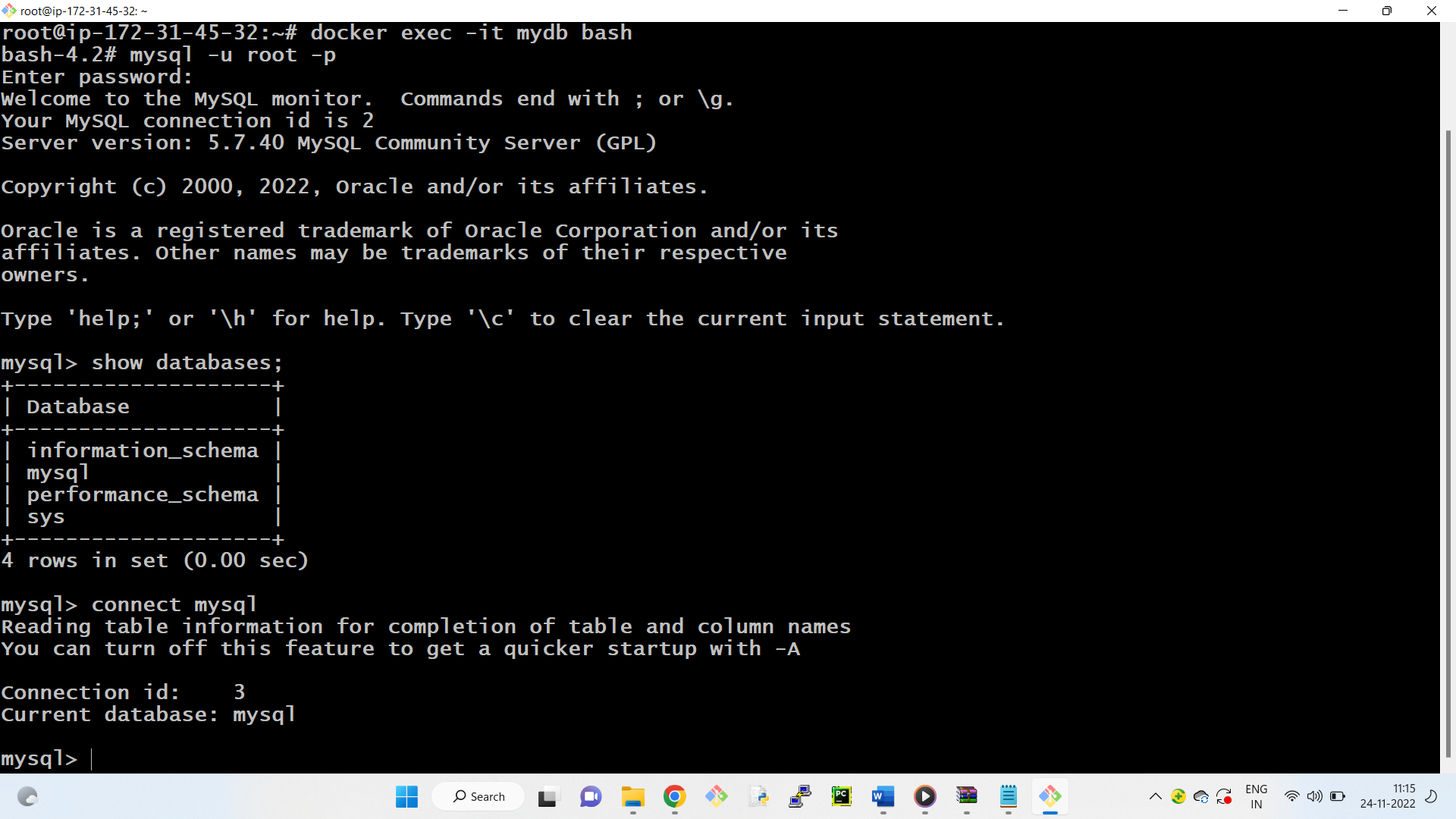
TO create emp tables and dept tables

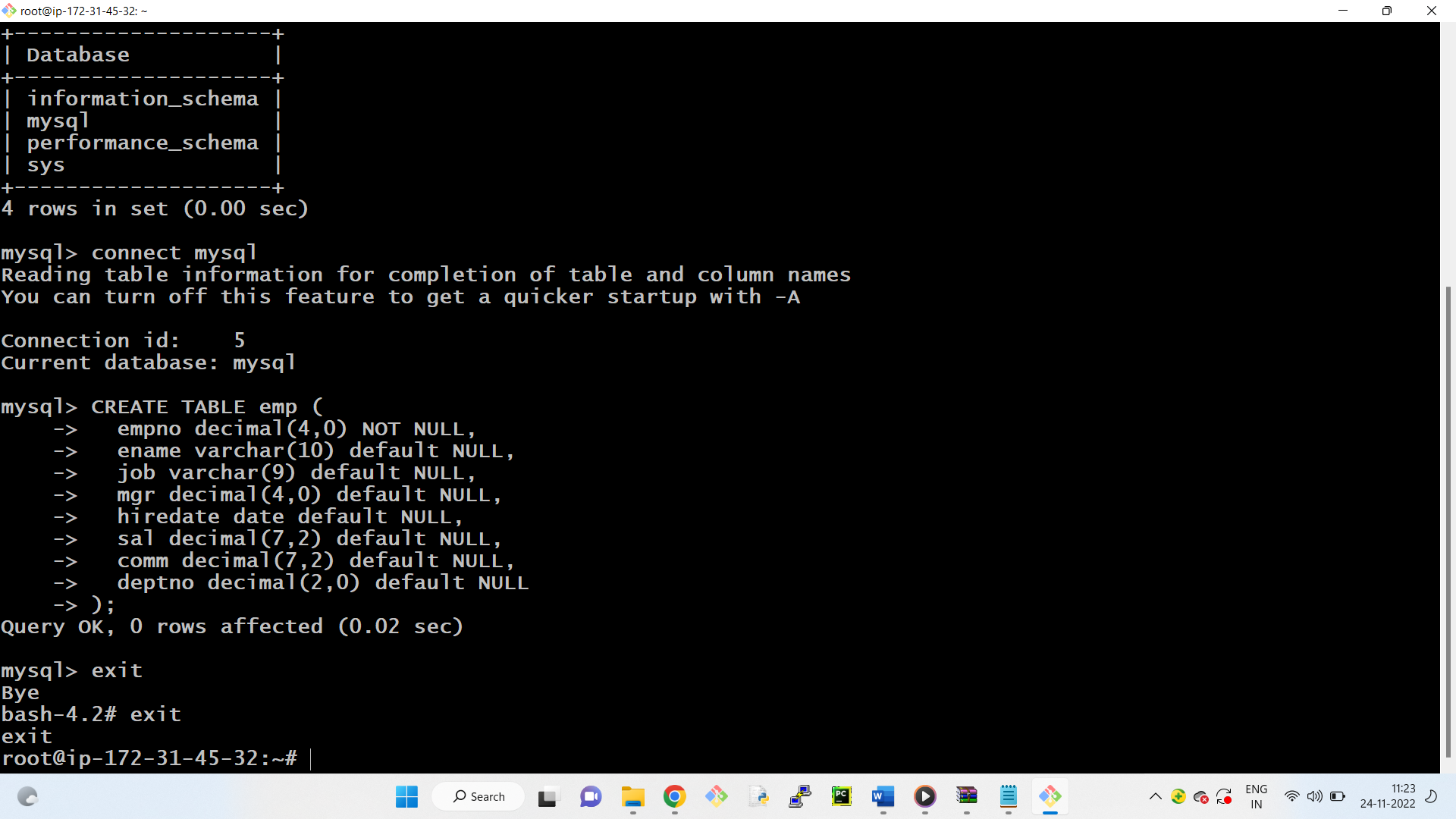
https://justinsomnia.org/2009/04/the-emp-and-dept-tables-for-mysql/

> exit

# exit

# exit





**Multi container architecture using docker**

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This can be done in 2 ways

1) --link

2) docker-compose

1) --link option

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Use case:

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Start two busybox containers and create link between them

Busybox: BusyBox packages together multiple, common UNIX utilities (or applets) into one executable binary. It **helps you create your own Linux distribution**, and our associated container image helps you deploy it across different devices

Create 1st busy box container

# docker run --name c10 -it busybox

/ #

How to come out of the container without exit

( ctrl + p + q)

Create 2nd busy box container and establish link to c1 container

# docker run --name c20 --link c10:c10-alias -it busybox ( c10-alias is alias name)

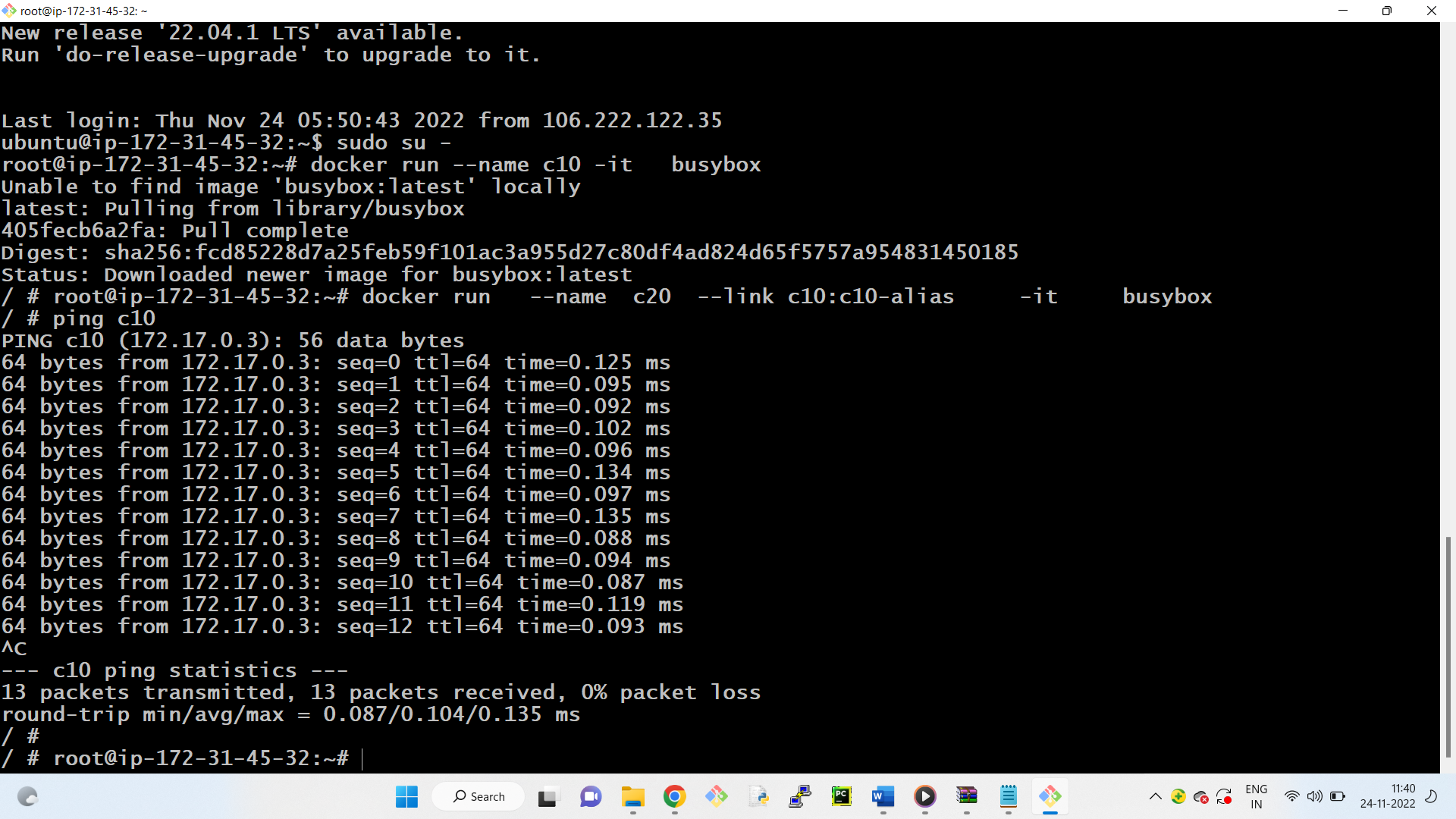
/ #

How to check link is established for not?

/ # ping c1

Ctrl +c ( to come out from ping )

( ctrl + p + q)



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Ex 2: Creating development environment using docker

Start mysql as container and link it with wordpress container.

Developer should be able to create wordpress website

1) TO start mysql as container

# docker run --name mydb -d -e MYSQL\_ROOT\_PASSWORD=sunil mysql:5

( if container is already in use , remove it

# docker rm -f mydb )

Check whether the container is running or not

# docker container ls

2) TO start wordpress container

# docker run --name mysite -d -p 5050:80 --link mydb:mysql wordpress

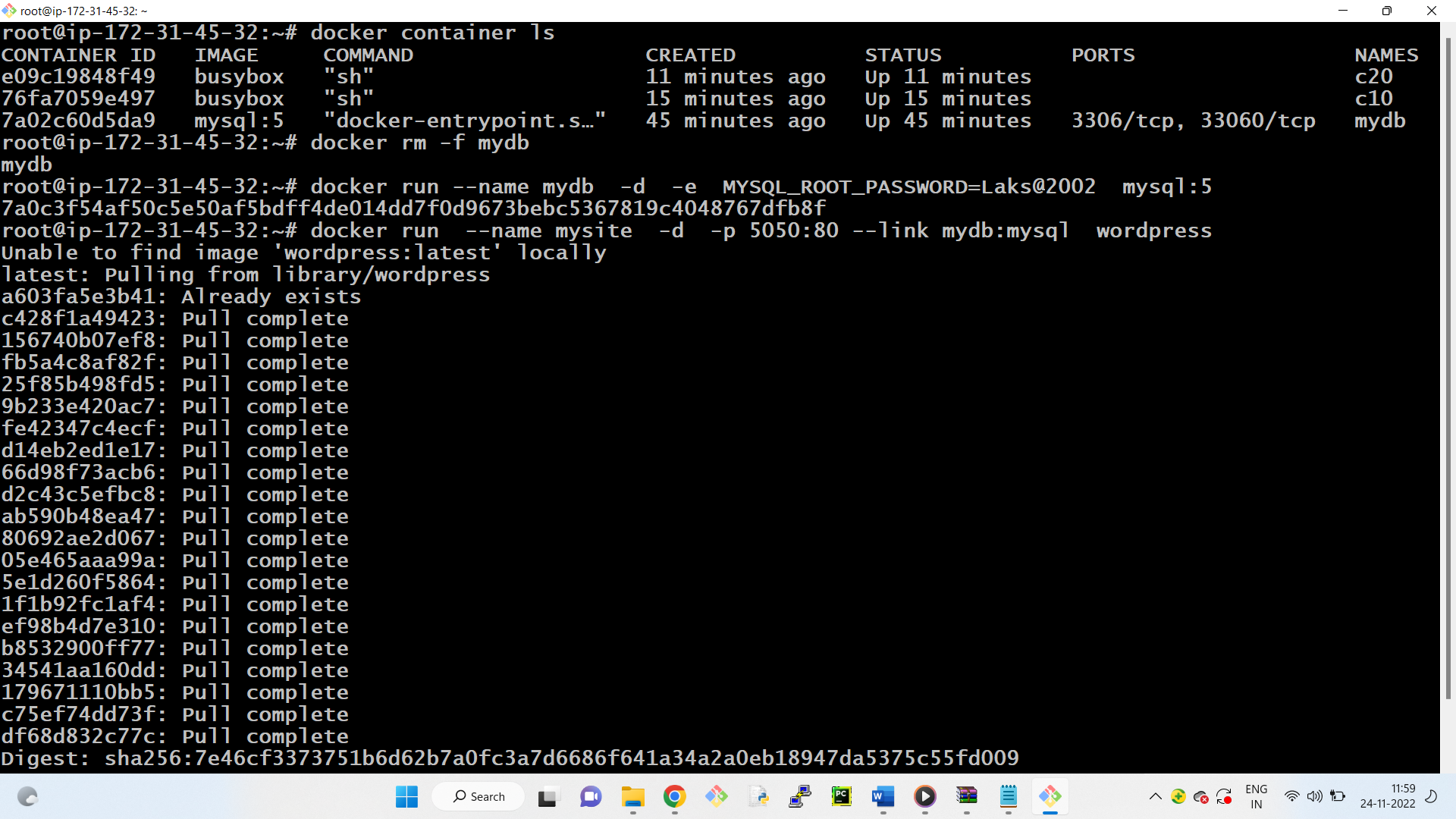
65.2.188.191:5050

Check wordpress installed or not

Open browser

public\_ip:5050

<http://65.2.188.191:5050/wp-admin/setup-config.php>



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Ex 3: Create LAMP Architecture using docker

L -- linux

A -- apache tomcat

M -- mysql

P -- php

( Linux os we already have )

Lets remove all the docker containers

# docker rm -f $(docker ps -aq)

# docker container ls ( we have no containers now )

1) TO start mysql as container

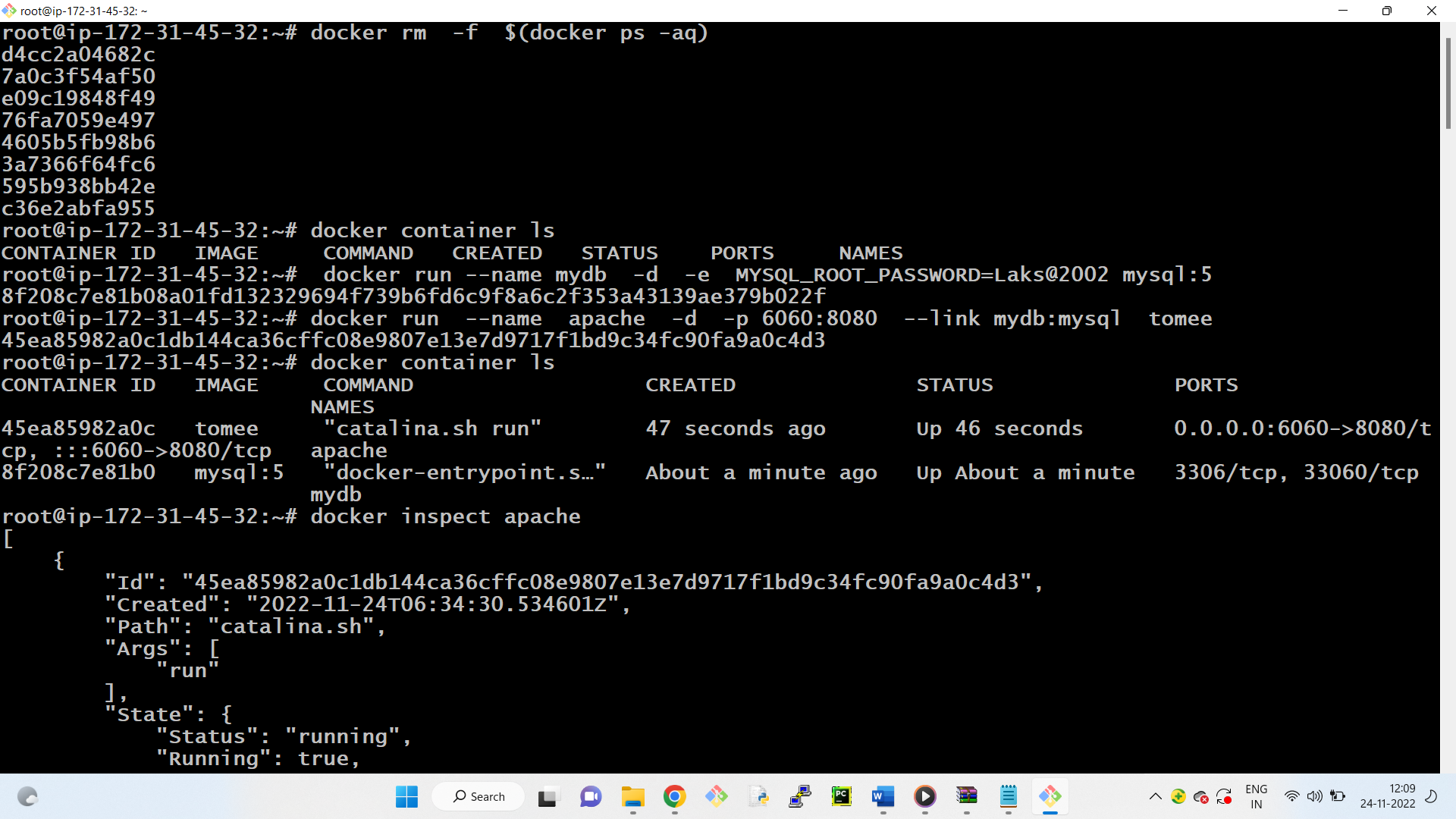
# docker run --name mydb -d -e MYSQL\_ROOT\_PASSWORD=Laks@2002 mysql:5

2) TO start tomcat as container

# docker run --name apache -d -p 6060:8080 --link mydb:mysql tomee

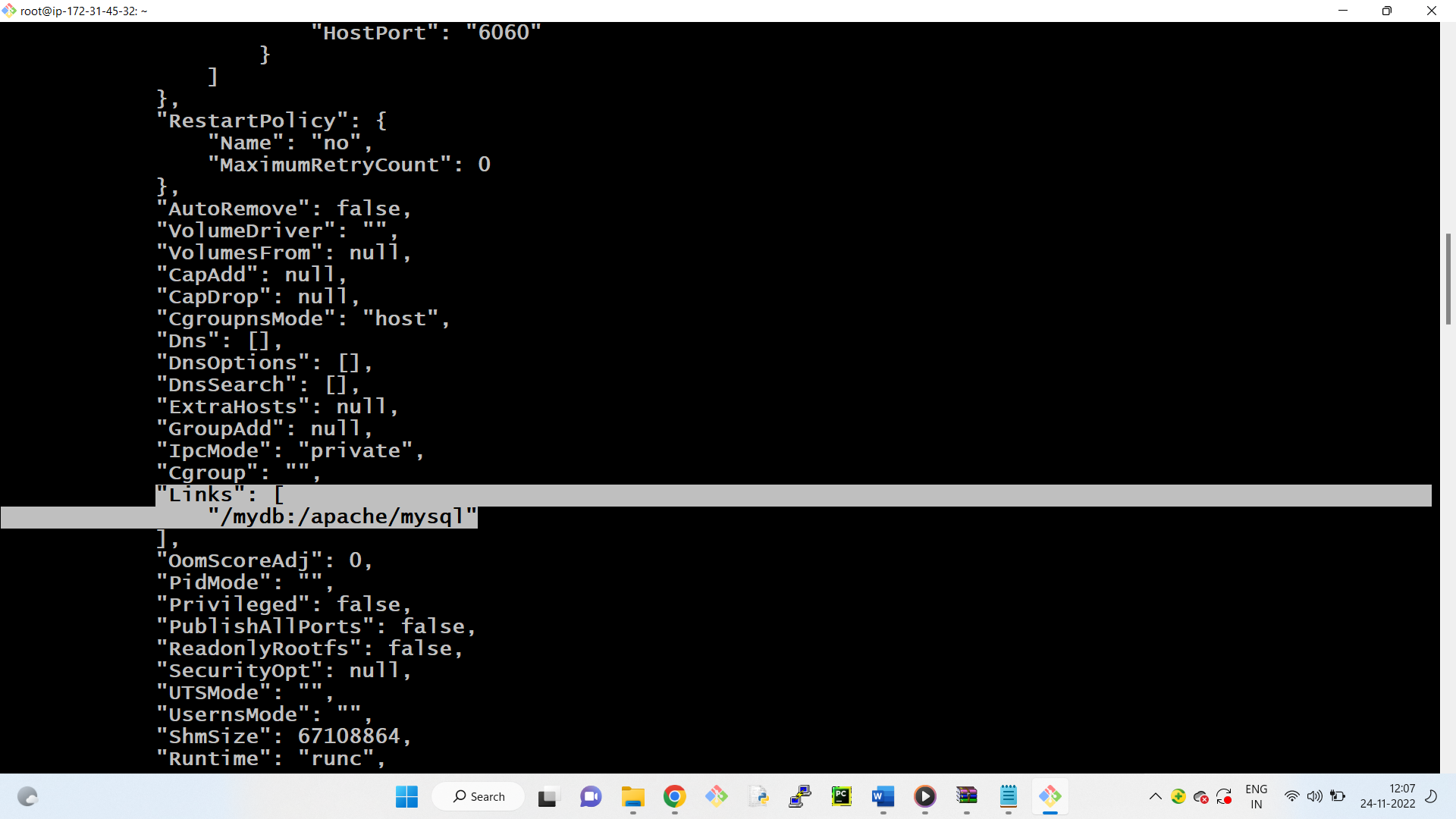
TO see the list of containers

# docker container ls



To check if tomcat is linked with mysql

# docker inspect apache ( apache is the name of the container )



3) TO start php as container

# docker run --name php -d --link apache:tomcat --link mydb:mysql php

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Ex 4:

Create CI-CD environment, where Jenkins container is linked with two tomcat containers.

Lets delete all the container

# docker rm -f $(docker ps -aq)

To start Jenkins as a container

#docker run --name devserver -d -p 7070:8080 jenkins/Jenkins

To check Jenkins is running or not?

Open browser

Public ip:7070

http://

We need two tomcat containers ( qa server and prod server )

# docker run –name qaserver -d -p 8080:8080 –link devserver:jenkins tomee

To check the tomcat use public\_ip but port number will be 8080

http://

# docker run –name prodserver -d -p 9090:8080 –link devserver:Jenkins tome

To check the tomcat of prodserver

http://

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Creating testing environment using docker

Create selenium hub container, and link it with two node containers.

One node with firefox installed, another node with chrome installed.

Tester should be able to run selenium automation programs for testing the application on multiple browsers.

To delete all the running containers

#

In Browser –open -hub.docker.com

Search for selenium

We have a image – selenium/hub

To start selenium/hub as container

# docker run –name hub -d -p 4444:4444 selenium/hub

In hub.docker.com

We also have- selenium/node-chrome-debug (It is container with chrome)

To start it as a container and link to hub (previous container)

# docker run –name chrome -d -p 5901:5990 –link hub:selenium selenium/node-firefox-debug

To see the list of container

#docker container ls

Note: firefox and chrome containers are GUI containers.

To see the GUI interface to chrome/firefox container

Download and install vnc viewer

In VNC viewer search bar

Public\_ip\_dockerhost:5901

Password – secret

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All the commands we learnt till date are adhoc commands.

In the previous usecase we have installed two containers( chrome and firefox )

Letsw say you need 10 containers?

Do we need to run 10 commands?

Instead of 80 commands, we can use docker compose

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