

Question 2: Create a database name mgdb in MongoDB and save above table in mgdb; show application of 4 MongoDB commands.

1: docker ps

```
PS C:\Users\Sadhana> docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
PS C:\Users\Sadhana> docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
2d6817b2007f   mysql    "docker-entripoint.s..." 2 hours ago   Exited (0) 7 minutes ago   mysqlldb
c857408a6694   sadhanatripathi/mongo:2   "docker-entripoint.s..." 8 hours ago   Exited (0) 8 hours ago   dockermongo
```

2: Running docker command for starting dockermongo container

```
PS C:\Users\Sadhana> docker start dockermongo
dockermongo
```

3: Exec bash statement for mongo

```
PS C:\Users\Sadhana> docker exec -it dockermongo bash
root@c857408a6694:/# mongo
MongoDB shell version v4.4.4
connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb
Implicit session: session { "id" : UUID("d19286de-5eda-4e2d-aa9c-9858c6317b98") }
MongoDB server version: 4.4.4
----
The server generated these startup warnings when booting:
  2021-02-24T19:19:21.192+00:00: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
  2021-02-24T19:19:21.203+00:00: /sys/kernel/mm/transparent_hugepage/enabled is 'always'. We suggest setting it to 'never'
----
  Enable MongoDB's free cloud-based monitoring service, which will then receive and display
  metrics about your deployment (disk utilization, CPU, operation statistics, etc).

  The monitoring data will be available on a MongoDB website with a unique URL accessible to you
  and anyone you share the URL with. MongoDB may use this information to make product
  improvements and to suggest MongoDB products and deployment options to you.

  To enable free monitoring, run the following command: db.enableFreeMonitoring()
  To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
----
> show dbs
admin    0.000GB
config  0.000GB
local   0.000GB
> use mgdb
switched to db mgdb
```

4: show dbs and create mgdb

```
> show dbs
admin    0.000GB
config  0.000GB
local   0.000GB
> use mgdb
switched to db mgdb
```

5: CRUD operation

```
use mgdb
switched to db mgdb
> db.user.insertMany([{"_id":"1","name":"apple","quantity":"5"}, {"_id":"2","name":"banana","quantity":"10"}, {"_id":"3","name":"pears","quantity":"10"}])
uncaught exception: SyntaxError: missing ] after element list
0(shell):1:60
> db.user.insertMany([{"_id":"1","name":"apple","quantity":"5"}, {"_id":"2","name":"banana","quantity":"10"}, {"_id":"3","name":"pears","quantity":"10"}])
uncaught exception: TypeError: db.user.insertMany is not a function
0(shell):1:1
> db.user.insertMany([{"_id":"1","name":"apple","quantity":"5"}, {"_id":"2","name":"banana","quantity":"10"}, {"_id":"3","name":"pears","quantity":"10"}])
{"acknowledged": true, "insertedIds": [ "1", "2", "3" ] }
> db.user.find().pretty()
  "_id" : "1", "name" : "apple", "quantity" : 5 }
  "_id" : "2", "name" : "banana", "quantity" : 10 }
  "_id" : "3", "name" : "pears", "quantity" : 10 }
> db.user.update({"_id":"3"}, {$set:{"quantity":"100"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.user.find().pretty()
  "_id" : "1", "name" : "apple", "quantity" : 5 }
  "_id" : "2", "name" : "banana", "quantity" : 10 }
  "_id" : "3", "name" : "pears", "quantity" : 100 }
> db.user.deleteOne({"_id":"2"})
{"acknowledged": true, "deletedCount": 1 }
> db.user.find().pretty()
  "_id" : "1", "name" : "apple", "quantity" : 5 }
  "_id" : "3", "name" : "pears", "quantity" : 100 }
```

6: Exiting from shell and container

```
> db.user.deleteOne({"_id": "2"})
{"acknowledged" : true, "deletedCount" : 1 }
> db.user.find().pretty()
{ "_id" : "1", "name" : "apple", "quantity" : "5" }
{ "_id" : "3", "name" : "pears", "quantity" : "100" }
> exit
bye
root@c857408a6694:/# exit
exit
```

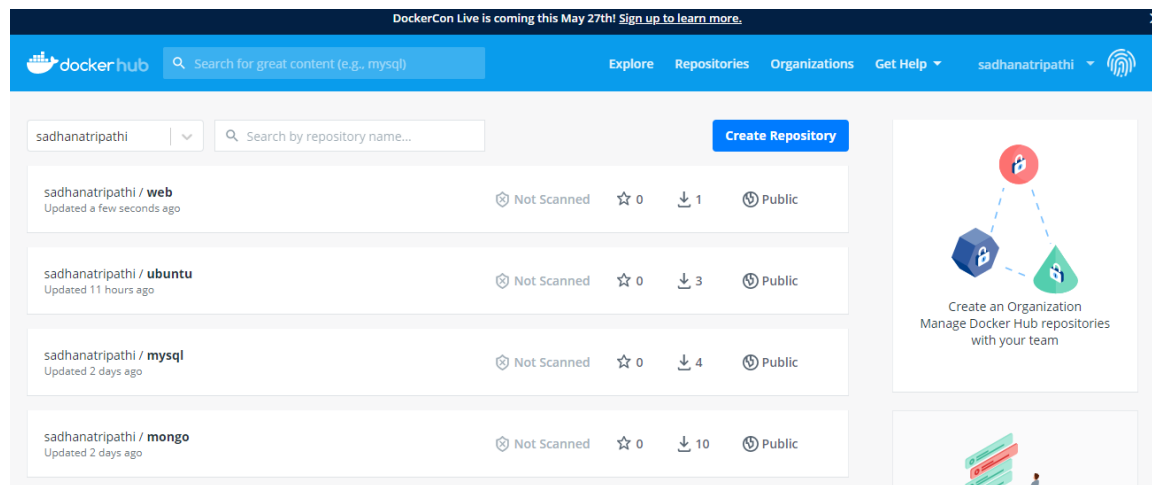
7: Entering into dockermongo container and checking if database still exist

```
> exit
bye
root@c857408a6694:/# exit
exit
PS C:\Users\Sadhan> docker exec -it dockermongo bash
root@c857408a6694:/# mongo
MongoDB shell version v4.4.4
connecting to: mongod://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongod
Implicit session: session { "id" : UUID("39f1dd58-0876-4f0c-b40c-b7084b9e94c9") }
MongoDB server version: 4.4.4
---
The server generated these startup warnings when booting:
  2021-02-24T19:19:21.192+00:00: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
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---
> show dbs
admin    0.000GB
config  0.000GB
local    0.000GB
mgdb     0.000GB
> use mgdb
switched to db mgdb
> db.user.find().pretty()
{ "_id" : "1", "name" : "apple", "quantity" : "5" }
{ "_id" : "3", "name" : "pears", "quantity" : "100" }
```

8: Docker image deployment in docker hub



The screenshot shows the Docker Hub web interface. At the top, there's a navigation bar with the Docker Hub logo, a search bar, and links for Explore, Repositories, Organizations, Get Help, and a user profile for sadhanatripathi. Below the navigation bar, there's a section for the user's repositories. The user's name 'sadhanatripathi' is in a dropdown menu, and there's a search bar for repository names. A 'Create Repository' button is visible. The repository list shows four entries: 'web', 'ubuntu', 'mysql', and 'mongo'. Each entry displays the repository name, the user, the update time, a 'Not Scanned' status, star count (0), download count, and visibility (Public). To the right of the repository list, there's a promotional banner for creating an organization and managing repositories with a team.

Challenges in deploying mysql and mongo in one container: Pull ubuntu , run container based on ubuntu and mysql installation was hindered once in ubuntu shell

```
root@50872ce2e3a8:/
PS C:\WINDOWS\system32> docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
sadhanatripathi/mysql latest 049c38d142d4 34 hours ago 546MB
sadhanatripathi/mongo 2 23a4d4460980 44 hours ago 449MB
php 7.3-apache 2b5f9853d97d 2 weeks ago 411MB
mysql latest 2933adc350f3 2 weeks ago 546MB
ubuntu latest f63181f19b2f 5 weeks ago 72.9MB
PS C:\WINDOWS\system32> docker run -it --name dockerubuntu ubuntu
50872ce2e3a8f3265607df88dd303261e354faf7b1758e4d67f242b1f5715923
PS C:\WINDOWS\system32> docker exec -it dockerubuntu bash
root@50872ce2e3a8:/# ls
bin lib lib32 libx32 root sbin
root@50872ce2e3a8:/# cd /tmp
root@50872ce2e3a8:/tmp# ls
bin lib lib32 libx32 root sbin
root@50872ce2e3a8:/tmp# exit
exit
PS C:\WINDOWS\system32> docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
50872ce2e3a8 ubuntu "/bin/bash" 11 hours ago Up 2 minutes dockerubuntu
PS C:\WINDOWS\system32> docker commit dockerubuntu sadhanatripathi/ubuntu
commit : The term 'commit' is not recognized as the name of a cmdlet, fu
tion, script file, or executable program.
Check the spelling of the name, or if a path was included, verify that the path is correct and try again.
At line:1 char:1
+ ~~~~~
+ ~~~~~
+ CategoryInfo          : ObjectNotFound: (commit:String) [], CommandNotFoundException
+ FullyQualifiedErrorId : CommandNotFoundException

PS C:\WINDOWS\system32> docker commit dockerubuntu sadhanatripathi/ubuntu
sha256:4b2c0ff1c28c8a4e4249b5655833f0a1a0b2e9d958b6f60c3bb080779190873d
PS C:\WINDOWS\system32> docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
sadhanatripathi/ubuntu latest 4b2c0ff1c28c 11 hours ago 72.9MB
sadhanatripathi/mysql latest 049c38d142d4 34 hours ago 546MB
sadhanatripathi/mongo 2 23a4d4460980 44 hours ago 449MB
php 7.3-apache 2b5f9853d97d 2 weeks ago 411MB
mysql latest 2933adc350f3 2 weeks ago 546MB
ubuntu latest f63181f19b2f 5 weeks ago 72.9MB
PS C:\WINDOWS\system32> docker login
Authenticating with existing credentials...
Login Succeeded
76da64f89473: Pushed
The push refers to repository [docker.io/sadhanatripathi/ubuntu]
76da64f89473: Pushing [=====] 3.584kB
dbf2c0f42a39: Mounted from library/ubuntu
9f32931c9d28: Mounted fr
latest: digest: sha256:8a46db5a7a9dcf7c1c9b8bf6d6c780c8609435fcd4cf296ec8ca672fc9e49d9e size: 1150
PS C:\WINDOWS\system32> docker pull sadhanatripathi/ubuntu
Using default tag: latest
latest: Pulling from sadhanatripathi/ubuntu
Digest: sha256:8a46db5a7a9dcf7c1c9b8bf6d6c780c8609435fcd4cf296ec8ca672fc9e49d9e
Status: Image is up to date for sadhanatripathi/ubuntu:latest
docker.io/sadhanatripathi/ubuntu:latest
PS C:\WINDOWS\system32> docker images
```

```
root@50872ce2e3a8:/
sadhanagsadhana:~$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
50872ce2e3a8 ubuntu "/bin/bash" 4 hours ago Up 4 hours dockerubuntu
sadhanagsadhana:~$ docker run -it dockerubuntu
Unable to find image 'dockerubuntu:latest' locally
docker: Error response from daemon: pull access denied for dockerubuntu, repository does not exist or may require 'docker login': denied: requested access to the resource is denied.
See 'docker run --help'.
sadhanagsadhana:~$ docker exec -it dockerubuntu bash
root@50872ce2e3a8:/# sudo
bash: sudo: command not found
root@50872ce2e3a8:/# apt update
Get:1 http://archive.ubuntu.com/ubuntu focal InRelease [109 kB]
Get:2 http://security.ubuntu.com/ubuntu focal-security InRelease [109 kB]
Get:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
Get:5 http://archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal-backports InRelease [101 kB]
Reading package lists... Done
Release file for http://security.ubuntu.com/ubuntu/dists/focal-security/InRelease is not valid yet (invalid for another 10h 35min 31s). Updates for this repository will not be applied.
Release file for http://archive.ubuntu.com/ubuntu/dists/focal-updates/InRelease is not valid yet (invalid for another 10h 34min 46s). Updates for this repository will not be applied.
Release file for http://archive.ubuntu.com/ubuntu/dists/focal-backports/InRelease is not valid yet (invalid for another 10h 31min 31s). Updates for this repository will not be applied.
root@50872ce2e3a8:/# apt install mysql-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
Some packages could not be installed. This may mean that you have
requested an impossible situation or if you are using the unstable
distribution that some required packages have not yet been created
or been moved out of Incoming.
The following information may help to resolve the situation:

The following packages have unmet dependencies:
mysql-server : Depends: mysql-server-8.0 but it is not going to be installed
Unable to correct problems, you have held broken packages.
root@50872ce2e3a8:/# mysql_secure_installation
bash: mysql_secure_installation: command not found
root@50872ce2e3a8:/# mysql
bash: mysql: command not found
root@50872ce2e3a8:/# mysql -u root -p
bash: mysql: command not found
root@50872ce2e3a8:/#
```