

Creating volume in docker-Volumes:

```
Command Prompt
Microsoft Windows [Version 10.0.19044.1288]
(c) Microsoft Corporation. All rights reserved.

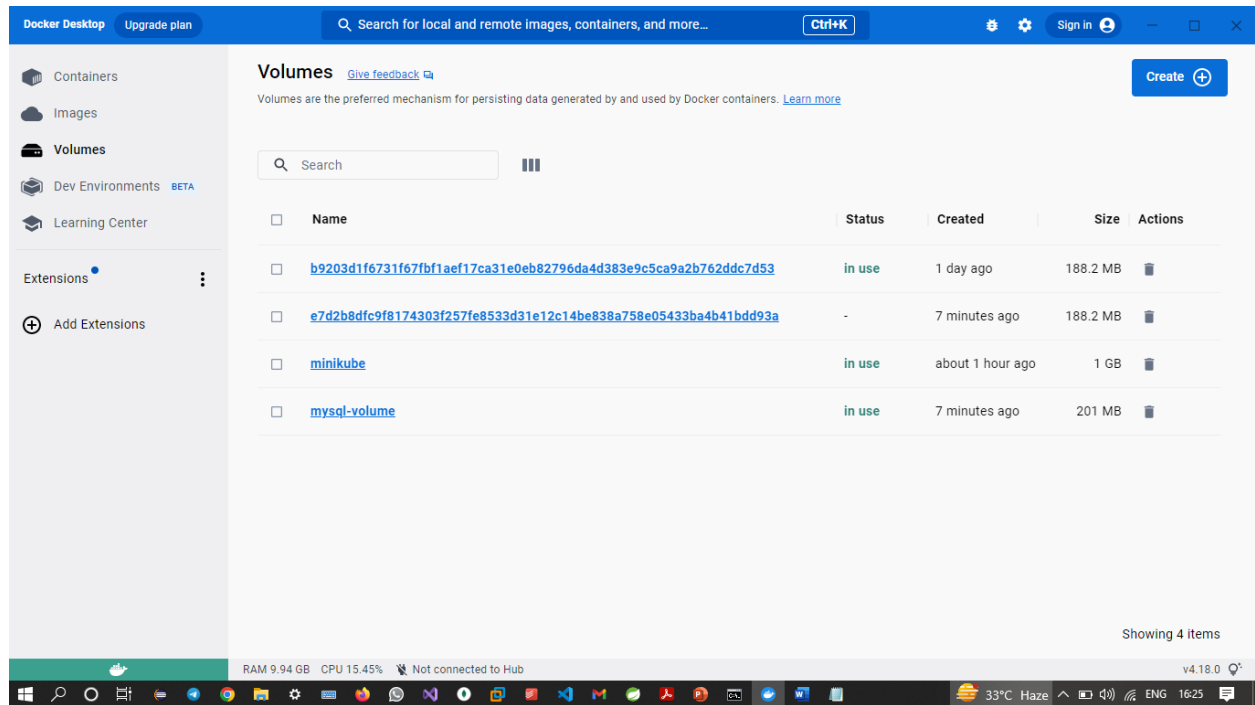
C:\Users\hits>docker volume create --name=mysql-volume
mysql-volume

C:\Users\hits>docker-compose up
no configuration file provided: not found

C:\Windows\System32\cmd.exe

C:\Users\hits\Documents\workspace-sts-3.8.0.RELEASE\EtourThree>docker volume ls
DRIVER      VOLUME NAME
local       b9203d1f6731f67fbf1aef17ca31e0eb82796da4d383e9c5ca9a2b762ddc7d53
local       e7d2b8dfc9f8174303f257fe8533d31e12c14be838a758e05433ba4b41bdd93a
local       minikube
local       mysql-volume

C:\Users\hits\Documents\workspace-sts-3.8.0.RELEASE\EtourThree>
```

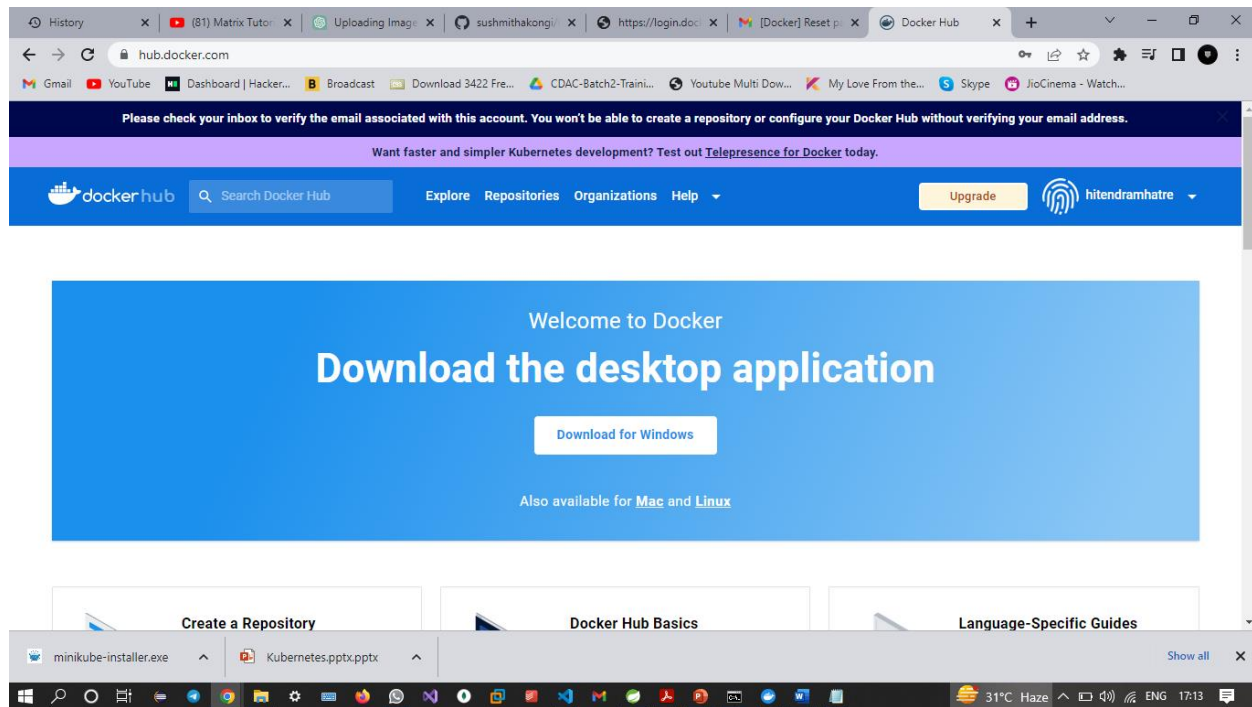


The screenshot displays an IDE with the following components:

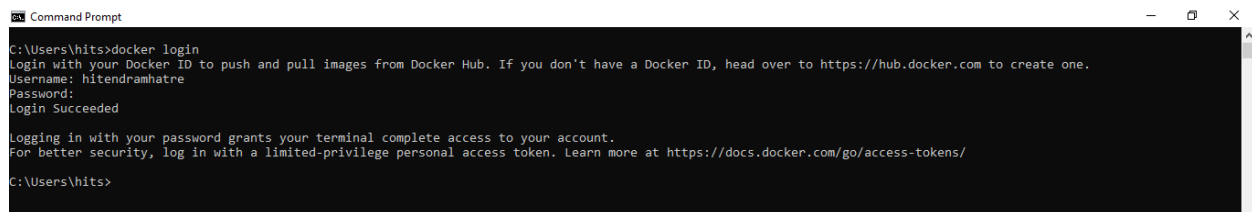
- Package Explorer (Left):** Shows the project structure, including 'demo', 'Etour', 'EtourOne', 'Etourtemp', and 'EtourThree [boot] [devtools]'. The 'EtourThree' directory is expanded, showing subdirectories like 'src/main/java', 'src/main/resources', 'src/test/java', and 'target'.
- Editor (Center):** Displays the content of the 'docker-compose.yml' file. The file defines two services:
 - server:** A service that builds from a Dockerfile in the 'target' directory, uses 'springbootmysql' as the base image, and connects to a 'mysql' database. It has ports '8080:8080' and depends on the 'mysql' service.
 - mysql:** A service based on 'mysql:8.0.30' that uses a 'mysql-volume' for data and has environment variables for database credentials.
- Outline (Right):** Shows the project structure, including 'tagyaml.org.2002:map', 'version: 3.8 tagyaml.org.2002:st', 'services tagyaml.org.2002:map', 'server tagyaml.org.2002:ma', 'build tagyaml.org.2002:r', 'context: /target tagy', 'dockerfile: Dockerfile', 'restart: always tagyaml.c', 'ports tagyaml.org.2002:st', '8080:8080 tagyaml.o', 'depends_on tagyaml.or', 'mysql tagyaml.or', 'image: springbootmysql', 'mysql tagyaml.org.2002:r', 'image: mysql:8.0.30 tagy'.
- Bottom Console:** Shows the status of the 'Pivotal tc Server Developer Edition v3.1' as '[Stopped]'. The console output area is empty, displaying 'No consoles to display at this time.'

```
C:\Windows\System32\cmd.exe - docker-compose up
C:\Users\hits>Documents\workspace-sts-3.8.0.RELEASE\EtourThree>docker-compose up
[+] Running 3/3
   Container etourthree-busy-williams-1 Created                                0.0s
   Container etourthree-mysqldb-1 Recreated                                  3.9s
   Container etourthree-server-1 Recreated                                   1.5s
Attaching to etourthree-busy-williams-1, etourthree-mysqldb-1, etourthree-server-1
etourthree-mysqldb-1 | 2023-04-26 10:48:29+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.30-1.el8 started.
etourthree-mysqldb-1 | 2023-04-26 10:48:30+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
etourthree-mysqldb-1 | 2023-04-26 10:48:30+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.30-1.el8 started.
etourthree-busy-williams-1 | > firstdemo@0.1.0 start /app
etourthree-busy-williams-1 | > react-scripts start
etourthree-busy-williams-1 | 
etourthree-mysqldb-1 | 2023-04-26 10:48:30+00:00 [Warn] [Entrypoint]: MYSQL_PASSWORD specified, but missing MYSQL_USER; MYSQL_PASSWORD will be ignored
etourthree-mysqldb-1 | 2023-04-26 10:48:30+00:00 [Note] [Entrypoint]: Initializing database files
etourthree-mysqldb-1 | 2023-04-26T10:48:30.688625Z 0 [Warning] [MY-011068] [Server] The syntax '--skip-host-cache' is deprecated and will be removed in a future
release. Please use SET GLOBAL host_cache_size=0 instead.
etourthree-mysqldb-1 | 2023-04-26T10:48:30.688802Z 0 [System] [MY-013169] [Server] /usr/sbin/mysqld (mysqld 8.0.30) initializing of server in progress as process
83
etourthree-mysqldb-1 | 2023-04-26T10:48:30.711799Z 1 [System] [MY-013576] [InnoDB] InnoDB initialization has started.
etourthree-mysqldb-1 | 2023-04-26T10:48:32.872924Z 1 [System] [MY-013577] [InnoDB] InnoDB initialization has ended.
etourthree-server-1 | 
etourthree-server-1 |      ____ _
etourthree-server-1 |     / ___ \
etourthree-server-1 |    / /___\ \
etourthree-server-1 |   /  __  \|
etourthree-server-1 |  /_/_____\|_\\
etourthree-server-1 | ||          ||
etourthree-server-1 | || Spring Boot ||
etourthree-server-1 | ||            || (v2.7.9)
etourthree-server-1 | -----
etourthree-server-1 | 2023-04-26 10:48:35.256 INFO 1 --- [ main] com.etour.EtourOneApplication : Starting EtourOneApplication v0.0.1-SNAPS
HOT using Java 1.8.0_212 on b1fa8bacde70 with PID 1 (/app/demo.jar started by root in /app)
etourthree-server-1 | 2023-04-26 10:48:35.281 INFO 1 --- [ main] com.etour.EtourOneApplication : No active profile set, falling back to 1
default profile: "default"
etourthree-busy-williams-1 | (node:30) [DEP_WEBPACK_DEV_SERVER_ON_AFTER_SETUP_MIDDLEWARE] DeprecationWarning: 'onAfterSetupMiddleware' option is deprecated. Please use
the 'setupMiddlewares' option.
etourthree-busy-williams-1 | (node:30) [DEP_WEBPACK_DEV_SERVER_ON_BEFORE_SETUP_MIDDLEWARE] DeprecationWarning: 'onBeforeSetupMiddleware' option is deprecated. Please u
se the 'setupMiddlewares' option.
etourthree-busy-williams-1 | 2023-04-26T10:48:39.468228Z 6 [Warning] [MY-010453] [Server] root@localhost is created with an empty password ! Please consider switching
off the --initialize-insecure option.
etourthree-busy-williams-1 | Starting the development server...
etourthree-busy-williams-1 | 
etourthree-server-1 | 2023-04-26 10:48:40.601 INFO 1 --- [ main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repository
```

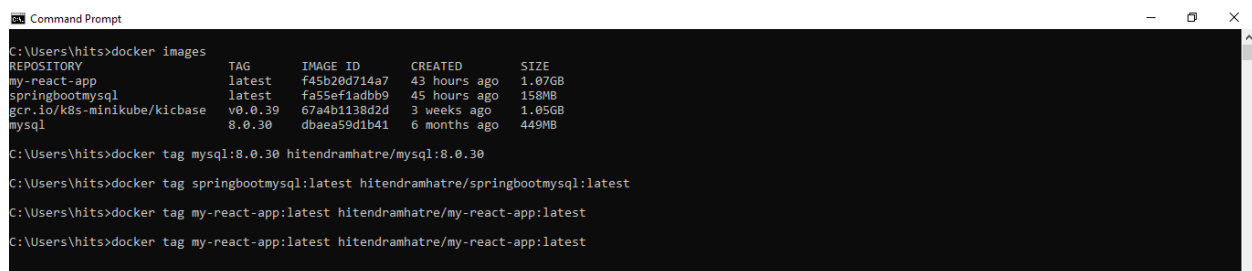
Create docker Hub account and login



Login to docker Hub



We need to tag our Docker images with our Docker Hub username and the image name that we want to use on Docker Hub.



Once we have tagged our images, we can use the docker push command to push them to Docker Hub:

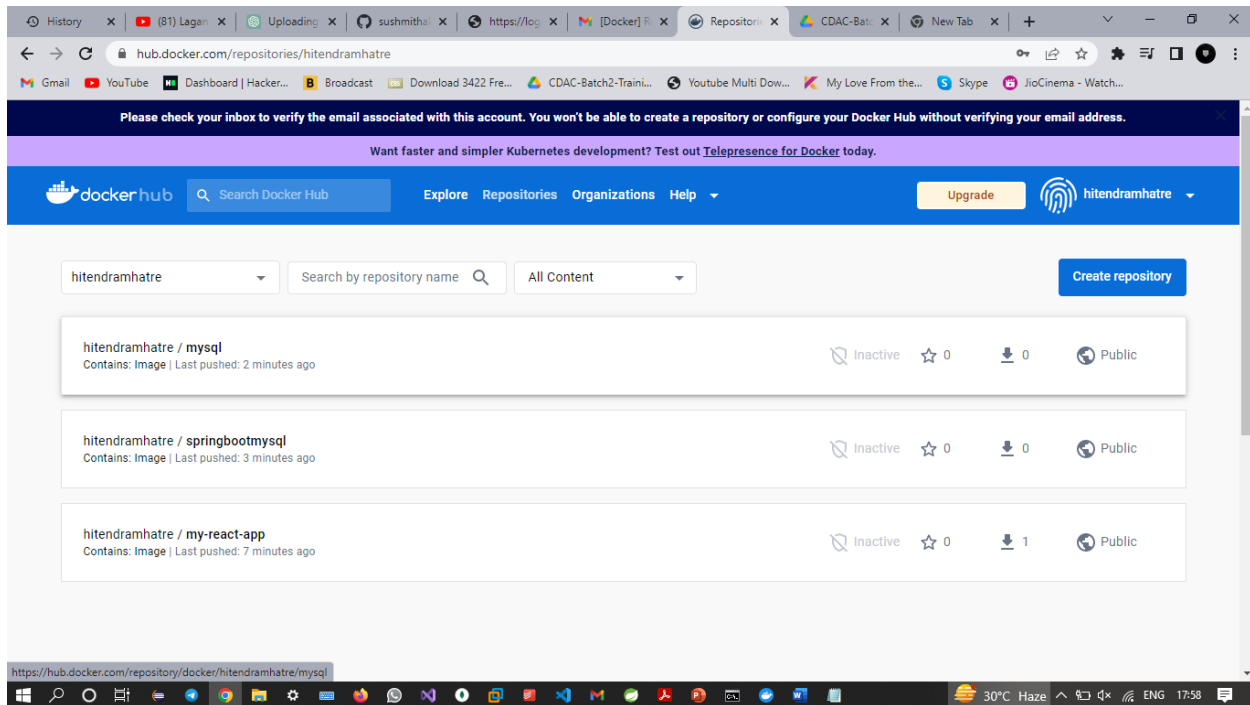
```
Command Prompt
C:\Users\hits>docker push hitendramhatre/my-react-app:latest
The push refers to repository [docker.io/hitendramhatre/my-react-app]
a2569f51bb9e: Pushed
c7e6aa47ffb: Pushed
9a2fbed6a69db: Pushed
b0e5f0a4a9abb: Pushed
7f30cde3f699: Pushed
fe810f5902cc: Mounted from library/node
dfd8c046c602: Mounted from library/node
4fc242d58285: Mounted from library/node
latest: digest: sha256:cbb1944d1d39b550b92f3e7f06f531edd69b0696db6351efee6950a5d8ceb08 size: 2001

C:\Users\hits>docker push hitendramhatre/springbootmysql:latest
The push refers to repository [docker.io/hitendramhatre/springbootmysql]
5f70bf18a086: Pushed
5de9db1f27ef: Pushed
ceaf9e1ebef5: Mounted from library/openjdk
9b0b7f3d56a0: Mounted from library/openjdk
f1b5933fe4b5: Mounted from library/openjdk
latest: digest: sha256:16a8a10b3a0d1a50ea0e762d64a7663545f422e18868a51d9fadbaa54caff5d4 size: 1365

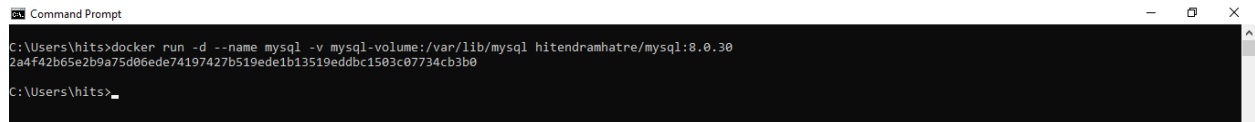
C:\Users\hits>docker push hitendramhatre/mysql:8.0.30
The push refers to repository [docker.io/hitendramhatre/mysql]
e24224578084: Mounted from library/mysql
b670df5ea093: Mounted from library/mysql
43c8ca9cd771: Mounted from library/mysql
feee68c33bd4: Mounted from library/mysql
7cd70e295a75: Mounted from library/mysql
01670720f8d1: Mounted from library/mysql
9db93db6978c: Mounted from library/mysql
dc4bc61c37e8: Mounted from library/mysql
3bf157422b00: Mounted from library/mysql
7b1b5089c4c8: Mounted from library/mysql
553b196ea5e8: Mounted from library/mysql
8.0.30: digest: sha256:f90d1aeb92a5c7b3a4178a3052d8bc27b1f52a811aacb27b619c10b778b9f281 size: 2618

C:\Users\hits>
```

You can view same in our docker Hub repositories as well



To attach volume to our MySQL image

A screenshot of a Windows Command Prompt window. The title bar reads "Command Prompt". The command entered is: `C:\Users\hits>docker run -d --name mysql -v mysql-volume:/var/lib/mysql hitendramhatre/mysql:8.0.30`. The output shows a long alphanumeric string: `2a4f42b65e2b9a75d06ede74197427b519ede1b13519eddbc1503c07734cb3b0`. The prompt then returns to `C:\Users\hits>`.

```
Command Prompt
C:\Users\hits>docker run -d --name mysql -v mysql-volume:/var/lib/mysql hitendramhatre/mysql:8.0.30
2a4f42b65e2b9a75d06ede74197427b519ede1b13519eddbc1503c07734cb3b0
C:\Users\hits>
```

Please note when you push your MySQL image to Docker Hub, the named volume will not be included with the image. However, when someone downloads and runs your MySQL image using the `-v` option to mount the same named volume, they will be able to access the same data that was stored in the volume when you pushed the image.