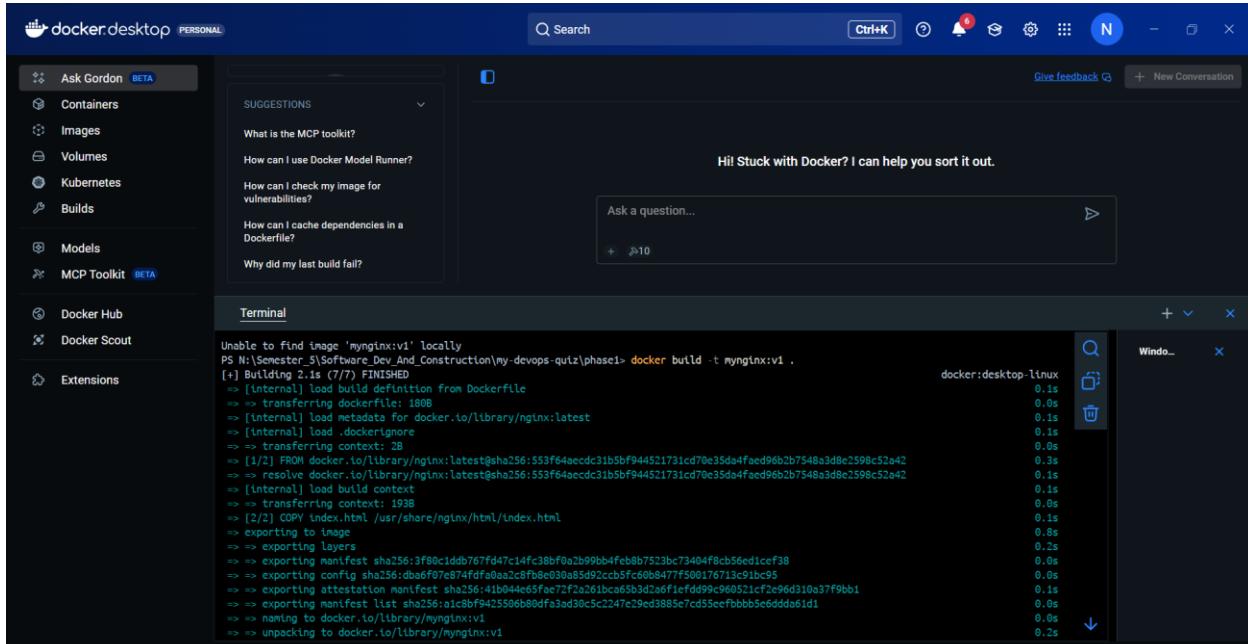


# Quiz Activity 2

CLASS ACTIVITY: “From Code to Cluster”

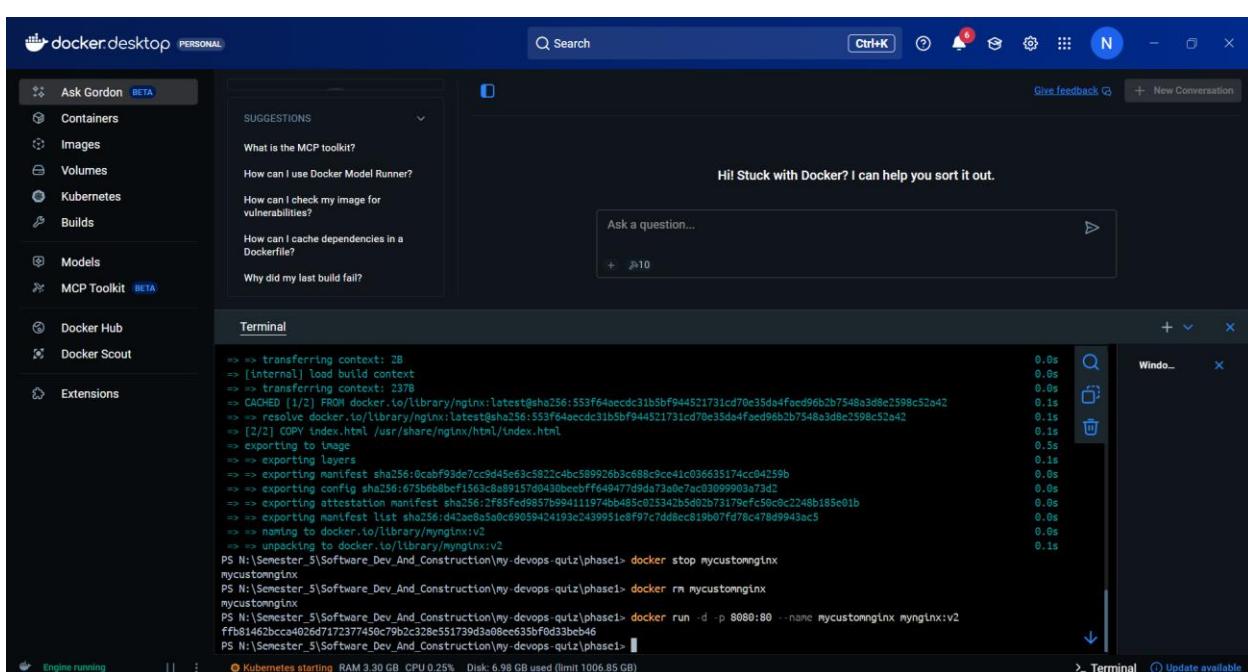
## PHASE 1:



The screenshot shows the Docker Desktop interface. On the left, a sidebar lists various tools: Ask Gordon (Beta), Containers, Images, Volumes, Kubernetes, Builds, Models, MCP Toolkit (Beta), Docker Hub, Docker Scout, and Extensions. The MCP Toolkit section is currently selected. In the center, there's a search bar and a "Give feedback" button. Below the search bar is a "Terminal" window containing the following build log:

```
PS N:\Semester_5\Software_Dev_And_Construction\my-devops-quiz\phase1> docker build -t mynginx:v1 .
(+) Building 2.1s (7/7) FINISHED
=> [internal] load build definition from Dockerfile
=> [internal] load metadata for docker.io/library/nginx:latest
=> [internal] load .dockerignore
=> [internal] transfer context: 2B
=> FROM docker.io/library/nginx:latest@sha256:553f64aecd31b5bf944521731cd70e35da4fead96b2b7548a3d8e2598c52a42
=> resolve docker.io/library/nginx:latest@sha256:553f64aecd31b5bf944521731cd70e35da4fead96b2b7548a3d8e2598c52a42
=> [internal] load build context
=> transfer context: 193B
=> COPY index.html /usr/share/nginx/html/index.html
=> exporting to image
=> exporting layers
=> exporting manifest sha256:3f80c1dd767fd47c14fc38bf0a2b99bb4feb8b7523bc73404f8cb56ed1cef38
=> exporting config sha256:d806f07e874ff0a0e2c8fb5e030a85a92cc5f608477f500176713c91b9c5
=> exporting attestation manifest sha256:1b0446c5f0e7f2a261bc0d5b3d2a6f1efdd999c960521cf2e96d310a37f9bb1
=> exporting manifest list sha256:a1c8bf942559eb8b0df3a3d9c5c2247e29ed3885e7cd55cefbb5b5e6ddaa61d1
=> naming to docker.io/library/mynginx:v1
=> unpacking to docker.io/library/mynginx:v1
```

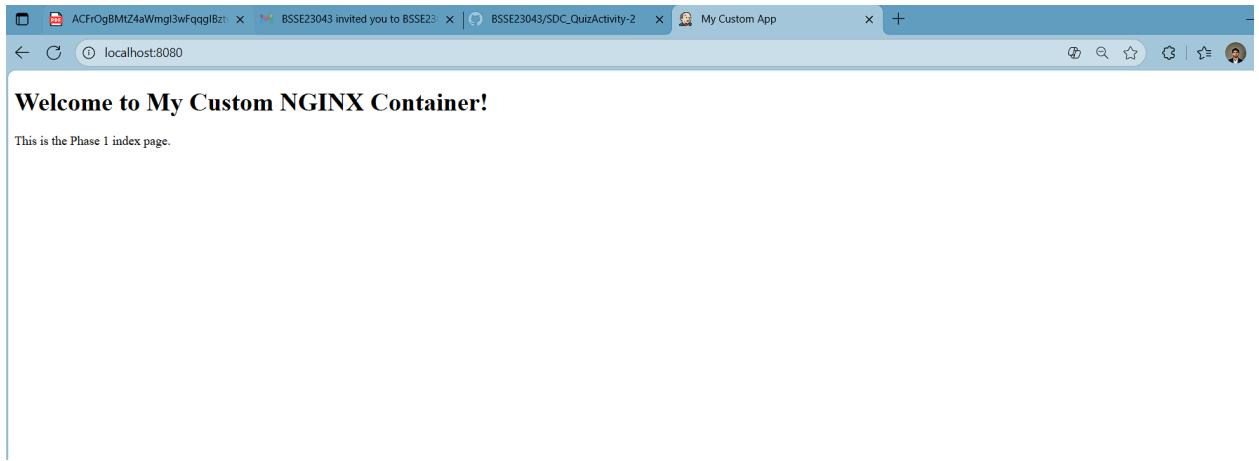
The terminal window also shows a progress bar for "Kubernetes starting" and resource usage information: RAM 2.22 GB, CPU 1.88%, Disk: 6.98 GB used (limit 1006.85 GB).

The second screenshot shows the same Docker Desktop interface. The terminal window now contains the following commands:

```
PS N:\Semester_5\Software_Dev_And_Construction\my-devops-quiz\phase1> docker stop mycustomnginx
mycustomnginx
PS N:\Semester_5\Software_Dev_And_Construction\my-devops-quiz\phase1> docker rm mycustomnginx
mycustomnginx
PS N:\Semester_5\Software_Dev_And_Construction\my-devops-quiz\phase1> docker run -d -p 8080:80 --name mycustomnginx mynginx:v2
ffb81462bcc4026d7172377450c79b2c328e551739d3a08ce635bf0d33bb46
PS N:\Semester_5\Software_Dev_And_Construction\my-devops-quiz\phase1>
```

The terminal window also shows a progress bar for "Kubernetes starting" and resource usage information: RAM 3.00 GB, CPU 0.25%, Disk: 6.98 GB used (limit 1006.85 GB).



## PHASE 2:

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\DeLL\OneDrive\Documents\GitHub\SDC_QuizActivity-2> cd OneDrive\Documents\GitHub\SDC_QuizActivity-2>
PS C:\Users\DeLL\OneDrive\Documents\GitHub\SDC_QuizActivity-2> cd phase1
PS C:\Users\DeLL\OneDrive\Documents\GitHub\SDC_QuizActivity-2\phase1> docker build -t phase1:v1 .
[+] Building 69.9s (8/8) FINISHED
=> [internal] load build definition from Dockerfile
=> transferring dockerfile: 104B
=> 0.0s
=> 0.0s
```

```
=> [internal] load build definition from Dockerfile
=> transferring dockerfile: 104B
=> 0.0s
=> [internal] load metadata for docker.io/library/nginx:alpine
=> 0.0s
=> [auth] library/nginx:pull token for registry-1.docker.io
=> 3.5s
=> [internal] load .dockerignore
=> 0.0s
=> transferring context: 2B
=> 0.1s
=> [internal] load build context
=> 0.2s
=> >> transferring context: 82B
=> 0.0s
=> [1/2] FROM docker.io/library/nginx:alpine@sha256:b3c656d55d7ad751196f21b7fd2e8d4da9cb430e32f6
=> 65.0s
=> => resolve docker.io/library/nginx:alpine@sha256:b3c656d55d7ad751196f21b7fd2e8d4da9cb430e32f64
=> 0.1s
=> => sha256:bdabb0d442710d667f4fd871b5fd215cc2a430a95b192bc508bf945b8e60999b 16.97MB / 16.97MB
=> 64.6s
```

Name	Tag	Image ID	Created	Size	Actions
mysql	v.0	107/29/1607:55	1 month ago	1.00 GB	

**Terminal**

```
>> ==> extracting sha256:194fa24e147df0010e146240d3b4bd25d04180c523dc717e4645b269991483e3  
>> ==> extracting sha256:3eaba6cd10a374d9ed629c26d76a5258e20ddfa09fce511c98aa620dcf3fae4  
>> ==> extracting sha256:df413d6ebdc834bccf63178455d406c4d25e2c2d38d2c1ab79ee5494b18e5624  
>> ==> extracting sha256:d9a55dab5954588333096b28b351999099bea5eb3c68c10e9ff175b12c97198d  
>> ==> extracting sha256:ff8a36d5502a57c3fc8eff48e578ab433a03b1dd528992ba0d966ddf853309a  
>> ==> extracting sha256:bdabb0d442710d667fafd871b5fd215cc2a430a95b192bc508bf945b8e60999b  
>> [2/2] COPY index.html /usr/share/nginx/html/index.html  
>> exporting to image  
>> exporting layers  
>> exporting manifest sha256:427078540bd64f3f7f8638dd20acb40aac6c7b5d5ba896516953f5a8845af850  
>> exporting config sha256:15d0c79a94b242ac16d9d7c54cd06270280a09913640ae9aa8b321157a19468a
```

RAM 4.57 GB CPU 21.51% Disk: 6.89 GB used (limit 1006.85 GB) 3:33 PM 11/29/2025

Name	Tag	Image ID	Created	Size	Actions
mysql	v.0	107/29/1607:55	2 months ago	591.21 MB	

**Terminal**

```
View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/spdaujgfwqnqj5j1doyossnu4  
j  
PS C:\Users\OneDrive\Documents\GitHub\SDC_QuizActivity-2\phase1> docker images  
REPOSITORY TAG IMAGE ID CREATED SIZE  
phase1 v1 d95d508170d5 40 seconds ago 79.8MB  
cicd-demo v1 1944e5463773 10 days ago 225MB  
flask_mysql_app-web latest 59f786836a43 2 weeks ago 403MB
```

RAM 4.57 GB CPU 8.72% Disk: 6.89 GB used (limit 1006.85 GB) 3:33 PM 11/29/2025

BETA

Name	Tag	Image ID	Created	Size	Actions
mysql	v.0	107/29/1607:55	2 months ago	591.21 MB	

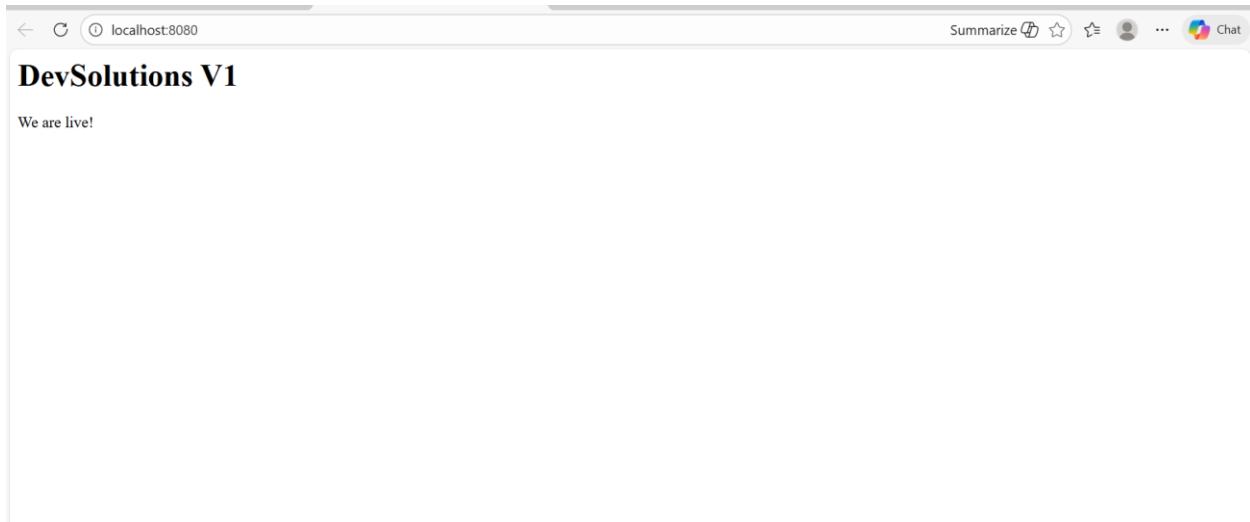
**Terminal**

```
.20-1-debian 12d6673564e0 2 months ago 591MB  
registry.k8s.io/kube-controller-manager v1.34.1  
2bf47c1b01f5 2 months ago 101MB  
registry.k8s.io/kube-scheduler v1.34.1  
6e9fbcc4e25a5 2 months ago 73.5MB  
registry.k8s.io/kube-apiserver v1.34.1  
b9d7c117f8ac 2 months ago 118MB  
registry.k8s.io/kube-proxy v1.34.1  
913cc83ca0b5 2 months ago 102MB  
registry.k8s.io/etcd 3.6.4-0  
e36c08168342 4 months ago 273MB
```

RAM 4.57 GB CPU 21.88% Disk: 6.89 GB used (limit 1006.85 GB) 3:33 PM 11/29/2025

```
PS C:\Users\Del\OneDrive\Documents\GitHub\SDC_QuizActivity-2\phase1> docker run -d -p 8080:80 phase1:v1  
f2b7f3ead38fd84a9852d5c57bf1920d39083a1524d304eb3d72c3eef2c2f62a
```

## WEB ACCESS 1:



```
PS C:\Users\Del\OneDrive\Documents\GitHub\SDC_QuizActivity-2> cd phase2  
PS C:\Users\Del\OneDrive\Documents\GitHub\SDC_QuizActivity-2\phase2> code deployment.yaml
```

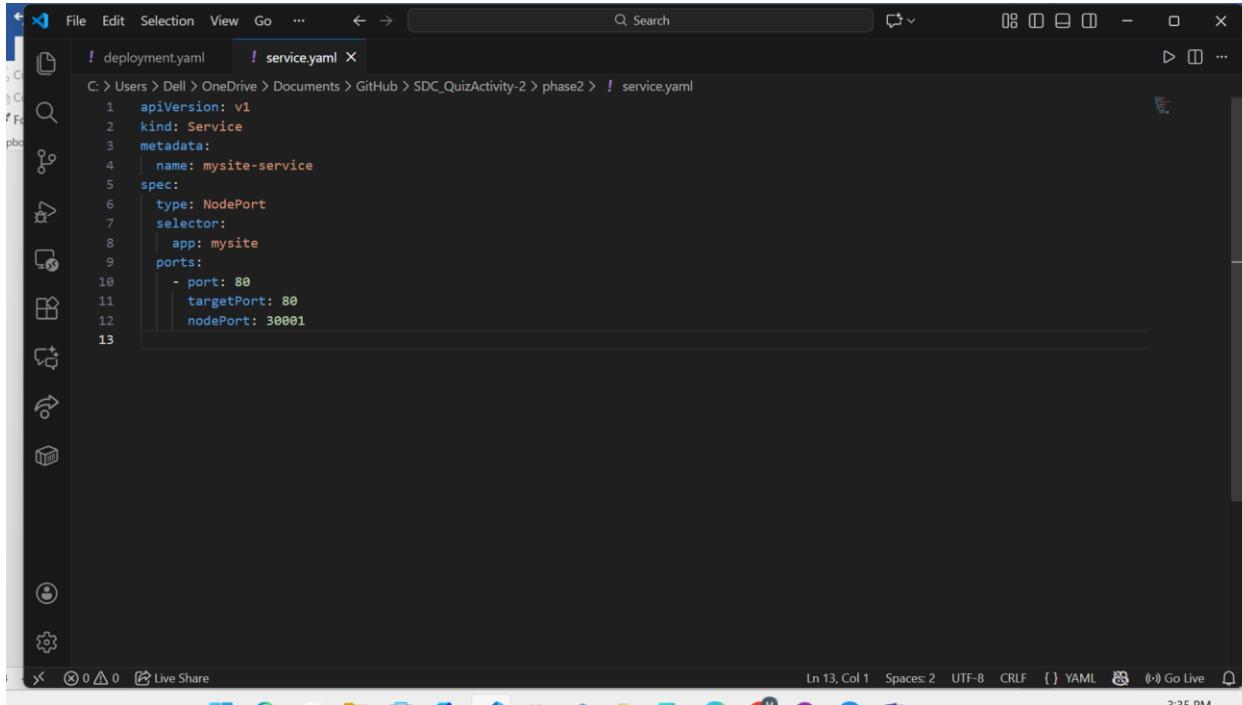
The screenshot shows a code editor interface with a dark theme. The left sidebar contains icons for File, Paste, Copy, Find, Clipboards, and others. The main pane shows the content of a file named "deployment.yaml". The code is a YAML configuration for a Kubernetes Deployment named "mysite-deployment". It specifies one replica, selects pods with "app: mysite", and uses a template with a matching label "app: mysite". The container is named "mysite", uses the local image "phase1:v1", and exposes port 80.

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: mysite-deployment
spec:
  replicas: 1
  selector:
    matchLabels:
      app: mysite
  template:
    metadata:
      labels:
        app: mysite
    spec:
      containers:
        - name: mysite
          image: phase1:v1           # local image from Phase-1
          imagePullPolicy: IfNotPresent
          ports:
            - containerPort: 80
```

```
deployment.apps mysite deployment detected from default namespace
PS C:\Users\DELL\OneDrive\Documents\GitHub\SDC_QuizActivity-2\phase2> kubectl apply -f deployment.yaml
>> kubectl get pods
deployment.apps/mysite-deployment created
NAME READY STATUS RESTARTS AGE
mysite-deployment-f86f5488d-rk2dq 0/1 Pending 0 0s
PS C:\Users\DELL\OneDrive\Documents\GitHub\SDC_QuizActivity-2\phase2> kubectl get pods
NAME READY STATUS RESTARTS AGE
mysite-deployment-f86f5488d-rk2dq 1/1 Running 0 27s
```



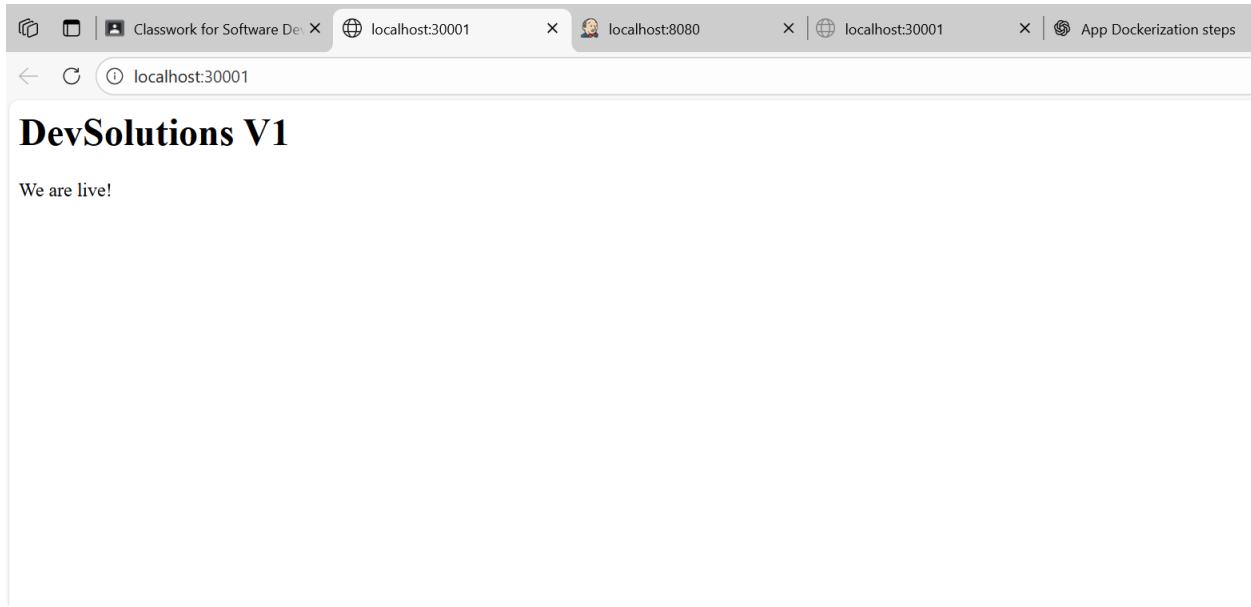
```
mysite deployment over/over 1/1 containersCreating
PS C:\Users\DELL\OneDrive\Documents\GitHub\SDC_QuizActivity-2\phase2> code service.yaml
PS C:\Users\DELL\OneDrive\Documents\GitHub\SDC_QuizActivity-2\phase2> kubectl apply -f service.yaml
>> kubectl get svc
service/mysite-service created
```



The screenshot shows the Visual Studio Code (VS Code) interface. On the left is the sidebar with file icons. The main editor area displays two YAML files:

```
! deployment.yaml ! service.yaml X
C > Users > Dell > OneDrive > Documents > GitHub > SDC_QuizActivity-2 > phase2 > ! service.yaml
1 apiVersion: v1
2 kind: Service
3 metadata:
4   name: mysite-service
5 spec:
6   type: NodePort
7   selector:
8     app: mysite
9   ports:
10    - port: 80
11      targetPort: 80
12      nodePort: 30001
13
```

The status bar at the bottom shows the file path: C:\Users\DELL\OneDrive\Documents\GitHub\SDC\_QuizActivity-2\phase2\service.yaml. It also displays line 13, column 1, spaces: 2, and encoding: UTF-8. There are icons for live share, go live, and a bell.



## Phase 3:

```
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2> cd app
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\app> code app.py
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\app> code requirements.txt
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2> cd phase3
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\phase3> code Dockerfile
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\phase3> docker-compose up -build
```

```
docker-compose.yml X
5th Semester > Software Development and Construction > SDC_QuizActivity-2 >
1   version: '3.8'
2
3   services:
4     web:
5       build: .
6       ports:
7         - "5000:5000"
8       depends_on:
9         - db
10      environment:
11        - MYSQL_HOST=db
12        - MYSQL_USER=root
13        - MYSQL_PASSWORD=root
14        - MYSQL_DATABASE=studentdb
15
16     db:
17       image: mysql:8.0
18       restart: always
19       environment:
20         MYSQL_ROOT_PASSWORD: root
21         MYSQL_DATABASE: studentdb
22       volumes:
23         - db_data:/var/lib/mysql
24
25   volumes:
26     db_data:
```

```

PS C:\Users\ahmed\Documents\5th Semester\Software Development and Construction\SDC_QuizActivity-2> docker-compose up --build
time="2025-11-29T17:15:46+05:00" level=warning msg="C:\Users\ahmed\Documents\5th Semester\Software Development and Construction\SDC_QuizActivity-2\docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion"
[*] Building 106.6s (13/13) FINISHED
--> [internal] load local bake definitions
--> reading from statin 654B
--> [internal] load build definition from Dockerfile
--> transferring dockerfile: 178B
--> [internal] load metadata for docker.io/library/python:3.10-slim
--> [auth] library/python:pull token for registry-1.docker.io
--> [internal] load .dockerignore
--> transferring context: 2B
--> (1/5) FROM docker.io/library/python:3.10-slim@sha256:c299e10e0070171113f9a1f109dd05e7e634fa94589b656e0e87bb22b2b382a2
--> resolve docker.io/library/python:3.10-slim@sha256:c299e10e0070171113f9a1f109dd05e7e634fa94589b656e0e87bb22b2b382a2
--> sha256: f86ba9c400fc7caf377d5426bc24a4c45958d795fd1a6c17a54b62c0984 256B / 256B
--> sha256: f86ba9c400fc7caf377d5426bc24a4c45958d795fd1a6c17a54b62c0984 256B / 256B
--> sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 1.2MB / 1.2MB
--> sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 1.2MB / 1.2MB
--> sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 2.9MB / 2.9MB
--> sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 2.9MB / 2.9MB
--> sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 44.6s / 44.6s
--> extracting sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 2.6s / 2.6s
--> extracting sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 0.4s / 0.4s
--> extracting sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 1.8s / 1.8s
--> extracting sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 0.8s / 0.8s
--> extracting sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 0.1s / 0.1s
--> extracting sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 0.05s / 0.05s
--> extracting sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 0.05s / 0.05s
--> extracting sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 0.15s / 0.15s
--> extracting sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 0.15s / 0.15s
--> extracting sha256: 9793cbbe51abab0971146499e9c711ab58df23ab26db9795c917b92 36.2s / 36.2s
--> exporting to image
--> exporting layers
--> exporting manifest sha256:b6913521896b5c7bae55fe3d3eeff30b3f6ec899b9b2d3a51bf5aca7665
--> exporting config sha256:fb1b064583299b2a95d7011996866d0d1d75372b2b2917c9aaf3c799f6df21
--> exporting attestation manifest sha256:0df62fbbae6695f5a64257d035cf7cae746b4d8759a5426ace1c72738f34de
--> exporting manifest list sha256:384c508b91bf50864524e09f61ababd56270121c8201209867b6069aaaf8897bf
--> naming to docker.io/library/sdc_gutizactivity-2-web:latest
--> unpacking to docker.io/library/sdc_gutizactivity-2-web:latest

```

```

--> exporting attestation manifest sha256:0df62fbbae6695f5a64257d035cf7cae746b4d8759a5426ace1c72738f34de
--> exporting manifest list sha256:384c508b91bf50864524e09f61ababd56270121c8201209867b6069aaaf8897bf
--> naming to docker.io/library/sdc_gutizactivity-2-web:latest
--> unpacking to docker.io/library/sdc_gutizactivity-2-web:latest
--> resolving provenance for metadata file
[*] Running 5/5
✓ sdc_gutizactivity-2-web          Built
✓ Network sdc_gutizactivity-2-default Created
✓ Volume sdc_gutizactivity-2-db     Created
✓ Container sdc_gutizactivity-2-db-1 Created
✓ Container sdc_gutizactivity-2-web-1 Created
Attaching to db-1, web-1
db-1 | 2025-11-29 12:17:35+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.44-1.el9 started.
db-1 | 2025-11-29 12:17:35+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
db-1 | 2025-11-29 12:17:35+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.44-1.el9 started.
web-1 |  * Serving Flask app 'app'
web-1 |  * Debug mode: off
web-1 |  WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
web-1 |  * Running on all addresses (0.0.0.0)
web-1 |  * Running on http://127.0.0.1:5000
web-1 |  * Running on http://172.19.0.3:5000
web-1 | Press CTRL+C to quit
db-1 | 2025-11-29 12:17:36+00:00 [Note] [Entrypoint]: Initializing database files
db-1 | 2025-11-29 12:17:36.3299312 [Warning] [MY-01068] [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.
db-1 | 2025-11-29 12:17:36.3299341 [System] [MY-01369] [Server] /usr/sbin/mysqld (mysqld 8.0.44) initializing of server in progress as process 80
db-1 | 2025-11-29 12:17:36.3409312 [System] [MY-01376] [InnoDB] InnoDB initialization has started.
db-1 | 2025-11-29 12:17:37.6903882 [System] [MY-01357] [InnoDB] InnoDB initialization has ended.
db-1 | 2025-11-29 12:17:40.4334586 [Warning] [MY-010453] [Server] root@localhost is created with an empty password ! Please consider switching off the --initialize-insecure option.
db-1 | 2025-11-29 12:17:46+00:00 [Note] [Entrypoint]: Database files initialized
db-1 | 2025-11-29 12:17:46+00:00 [Note] [Entrypoint]: Starting temporary server
db-1 | 2025-11-29 12:17:47.0149832 [Warning] [MY-01068] [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.
db-1 | 2025-11-29 12:17:47.0217102 [System] [MY-010116] [Server] /usr/sbin/mysqld (mysqld 8.0.44) starting as process 124
db-1 | 2025-11-29 12:17:47.0594772 [System] [MY-01376] [InnoDB] InnoDB initialization has started.
db-1 | 2025-11-29 12:17:47.7288912 [System] [MY-01377] [InnoDB] InnoDB initialization has ended.
db-1 | 2025-11-29 12:17:48.3394762 [Warning] [MY-01068] [Server] CA certificate ca.pem is self signed.
db-1 | 2025-11-29 12:17:48.3395942 [System] [MY-013692] [Server] Channel mysql_main configured to support TLS. Encrypted connections are now supported for this channel.
db-1 | 2025-11-29 12:17:48.3461182 [Warning] [MY-011810] [Server] Insecure configuration for --pid-file: Location '/var/run/mysqld' in the path is accessible to all OS users. Consider choosing a different directo

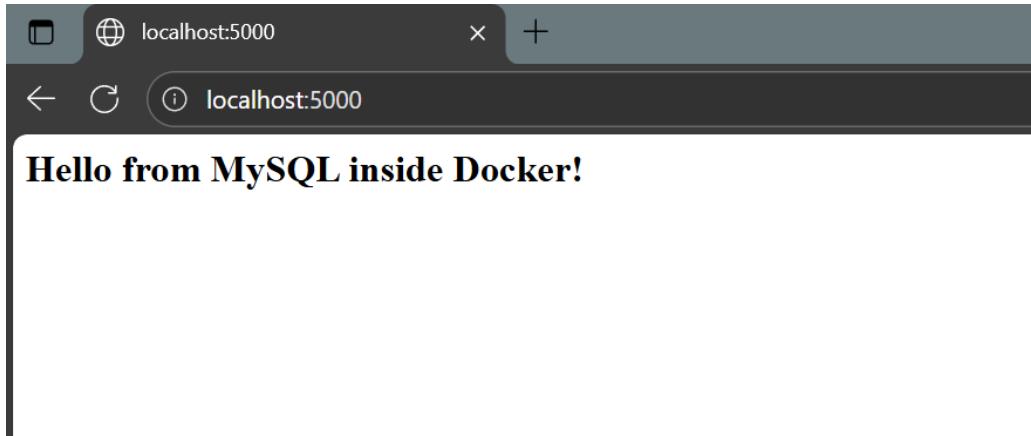
```

```

ry.
db-1 | 2025-11-29T12:17:48.3882002 0 [System] [MY-01123] [Server] X Plugin ready for connections. Socket: /var/run/mysql/mysql.sock
db-1 | 2025-11-29T12:17:48.3892452 0 [System] [MY-010931] [Server] /usr/sbin/mysqld: ready for connections. Version: '8.0.44' socket: '/var/run/mysql/mysql.sock' port: 0 MySQL Community Server - GPL.
db-1 | 2025-11-29 12:17:48+00:00 [Note] [Entrypoint]: Temporary server started.
db-1 | '/var/lib/mysql/mysql.sock' -> '/var/run/mysql/mysql.sock'
db-1 | Warning: Unable to load '/usr/share/zonetinfo/iso3166.tab' as time zone. Skipping it.
db-1 | Warning: Unable to load '/usr/share/zonetinfo/leap-seconds.list' as time zone. Skipping it.
db-1 | Warning: Unable to load '/usr/share/zonetinfo/leapseconds' as time zone. Skipping it.
db-1 | Warning: Unable to load '/usr/share/zonetinfo/tzdata.tab' as time zone. Skipping it.
db-1 | Warning: Unable to load '/usr/share/zonetinfo/zone.tab' as time zone. Skipping it.
db-1 | Warning: Unable to load '/usr/share/zonetinfo/zone1970.tab' as time zone. Skipping it.
db-1 | 2025-11-29 12:17:54+00:00 [Note] [Entrypoint]: Creating database studentdb
db-1 |
db-1 | 2025-11-29 12:17:54+00:00 [Note] [Entrypoint]: Stopping temporary server
db-1 | 2025-11-29T12:17:54.5999532 11 [System] [MY-013172] [Server] Received SHUTDOWN from user root. Shutting down mysqld (Version: 8.0.44).
db-1 | 2025-11-29T12:17:56.4999172 0 [System] [MY-010910] [Server] /usr/sbin/mysqld: Shutdown complete (mysqld 8.0.44) MySQL Community Server - GPL.
db-1 | 2025-11-29 12:17:56+00:00 [Note] [Entrypoint]: Temporary server stopped
db-1 |
db-1 | 2025-11-29 12:17:56+00:00 [Note] [Entrypoint]: MySQL init process done. Ready for start up.
db-1 |
db-1 | 2025-11-29T12:17:57.2173612 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.
db-1 | 2025-11-29T12:17:57.2238482 0 [System] [MY-010116] [Server] /usr/sbin/mysqld (mysqld 8.0.44) starting as process 1
db-1 | 2025-11-29T12:17:57.2436932 1 [System] [MY-01376] [InnoDB] InnoDB initialization has started.
db-1 | 2025-11-29T12:17:57.8128312 1 [System] [MY-013577] [InnoDB] InnoDB initialization has ended.
db-1 | 2025-11-29T12:17:58.3006172 0 [Warning] [MY-010666] [Server] CA certificate ca.pem is self signed.
db-1 | 2025-11-29T12:17:58.3001162 0 [System] [MY-013602] [Server] Channel mysql_main configured to support TLS. Encrypted connections are now supported for this channel.
db-1 | 2025-11-29T12:17:58.3075822 0 [Warning] [MY-011810] [Server] Insecure configuration for --pid-file: Location '/var/run/mysqld' in the path is accessible to all OS users. Consider choosing a different directo
ry.
db-1 | 2025-11-29T12:17:58.3488692 0 [System] [MY-01123] [Server] X Plugin ready for connections. Bind-address: '::' port: 3306, socket: /var/run/mysql/mysql.sock
db-1 | 2025-11-29T12:17:58.3488312 0 [System] [MY-010931] [Server] /usr/sbin/mysqld: ready for connections. Version: '8.0.44' socket: '/var/run/mysql/mysql.sock' port: 3306 MySQL Community Server - GPL.
web-1 | 172.19.0.1 - - [29/Nov/2025:12:29:48] "GET /favicon.ico HTTP/1.1" 404 -
web-1 | 172.19.0.1 - - [29/Nov/2025:12:29:48] "GET /favicon.ico HTTP/1.1" 404 -
web-1 | 172.19.0.1 - - [29/Nov/2025:12:30:47] "GET / HTTP/1.1" 200 -
web-1 | 172.19.0.1 - - [29/Nov/2025:12:30:47] "GET /favicon.ico HTTP/1.1" 404 -

```

[View in Docker Desktop](#) [View Config](#) [Enable Watch](#)



```
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\phase3> docker-compose logs web
time="2025-11-30T14:18:06+05:00" level=warning msg="N:\\Semester_5\\Software_Dev_And_Construction\\SDC_QuizActivity-2\\docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion"
web-1 | * Serving Flask app `app`
web-1 | * Debug mode: off
web-1 | WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
web-1 | * Running on all addresses (0.0.0.0)
web-1 | * Running on http://127.0.0.1:5000
web-1 | * Running on http://172.19.0.3:5000
web-1 | Press CTRL+C to quit
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\phase3>
```

```
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\phase3> docker-compose logs db
time="2025-11-30T14:18:24+05:00" level=warning msg="N:\\Semester_5\\Software_Dev_And_Construction\\SDC_QuizActivity-2\\docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion"
db-1 | 2025-11-30 09:17:36+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.44-1.el9 started.
db-1 | 2025-11-30 09:17:37+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
db-1 | 2025-11-30 09:17:37+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.44-1.el9 started.
db-1 | '/var/lib/mysql/mysql.sock' -> '/var/run/mysql/mysql.sock'
db-1 | 2025-11-30T09:17:40.358339Z 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.
db-1 | 2025-11-30T09:17:40.386042Z 0 [System] [MY-010116] [Server] /usr/sbin/mysqld (mysqld 8.0.44) starting as process 1
db-1 | 2025-11-30T09:17:40.495418Z 1 [System] [MY-013576] [InnoDB] InnoDB initialization has started.
db-1 | 2025-11-30T09:17:41.715170Z 1 [System] [MY-013577] [InnoDB] InnoDB initialization has ended.
db-1 | 2025-11-30T09:17:42.523063Z 0 [Warning] [MY-010068] [Server] CA certificate ca.pem is self signed.
db-1 | 2025-11-30T09:17:42.523149Z 0 [System] [MY-013602] [Server] Channel mysql_main configured to support TLS. Encrypted connections are now supported for this channel.
db-1 | 2025-11-30T09:17:42.527677Z 0 [Warning] [MY-011810] [Server] Insecure configuration for --pid-file: Location '/var/run/mysqld' in the path is accessible to all OS users. Consider choosing a different directory.
db-1 | 2025-11-30T09:17:42.573107Z 0 [System] [MY-011232] [Server] X Plugin ready for connections. Bind-address: '::' port: 33060, socket: /var/run/mysqld/mysqlx.sock
db-1 | 2025-11-30T09:17:42.573250Z 0 [System] [MY-010931] [Server] /usr/sbin/mysqld: ready for connections. Version: '8.0.44' socket: '/var/run/mysql/mysql.sock' port: 3306 MySQL Community Server - GPL.
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\phase3>
```

## Challenge:

```
n/mysql/mysql.sock` port: 3306 MySQL Community Server - GPL.
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\phase3> docker-compose restart web
time="2025-11-30T14:20:31+05:00" level=warning msg="N:\\Semester_5\\Software_Dev_And_Construction\\SDC_QuizActivity-2\\docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Restarting 1/1
  ✓ Container sdc_quizactivity-2-web-1  Started                                     2.0s
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\phase3> docker kill sdc_web
Error response from daemon: cannot kill container: sdc_web: No such container: sdc_web
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\phase3> docker-compose up -d web
time="2025-11-30T14:21:13+05:00" level=warning msg="N:\\Semester_5\\Software_Dev_And_Construction\\SDC_QuizActivity-2\\docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion"
[+] Running 2/2
  ✓ Container sdc_quizactivity-2-db-1  Running                                     0.0s
  ✓ Container sdc_quizactivity-2-web-1  Running                                     0.0s
PS N:\Semester_5\Software_Dev_And_Construction\SDC_QuizActivity-2\phase3>
```

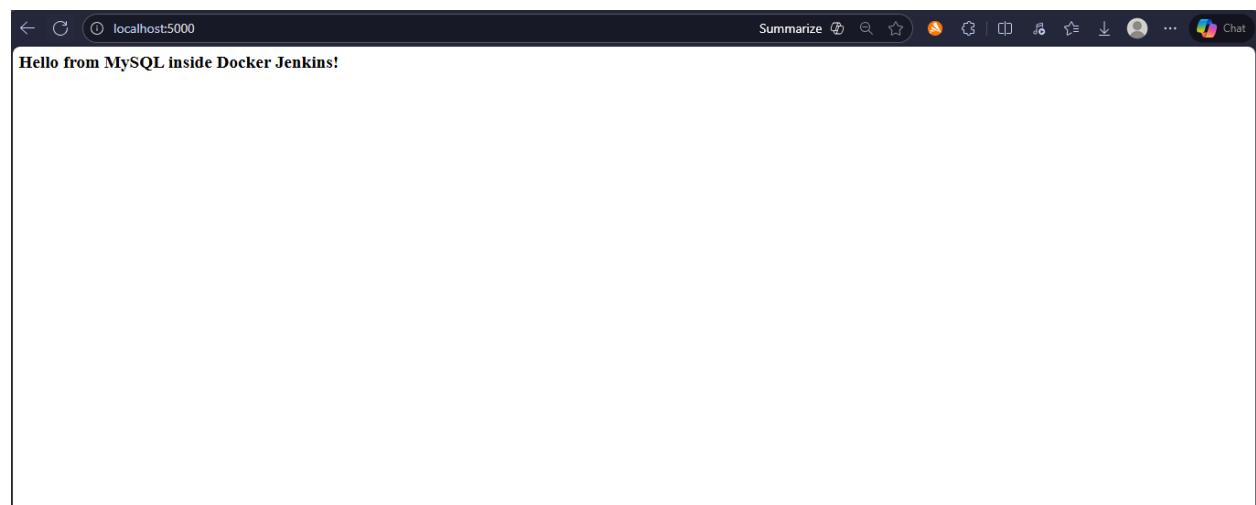
## PHASE 4:

Pipeline has been created, the GitHub repository has also been connected

The screenshot shows the Jenkins pipeline interface for the 'quiz\_activity\_pipeline'. The top navigation bar includes links for Jenkins, Status, Changes, Build Now, Configure, Delete Pipeline, Full Stage View, Stages, Rename, Pipeline Syntax, and Credentials. The main content area displays the pipeline configuration with a 'Status' card and a 'Stage View' card.

**Status Card:**  
This is a pipeline for managing the image created in the SDC Quiz Activity 2.  
The group members responsible for this project are:  
-> M. Umar Younas (BSEE23043)  
-> M. Numan Tahir (BSEE23069)  
-> Laiba Ahmed (BSEE23081)  
-> Manai Rara (BSEE23099)

**Stage View Card:**  
Average stage times:  
(full run time: ~1min 46s)  
Declarative: Checkout SCM: 7s  
Build: 1min 31s  
Test: 1s  
Deploy to Kubernetes: 918ms  
Builds: #11 (Nov 30 18:03) - No Changes  
Today: #11 1:03 PM



Kubernetes deployment and pods

Name of the deployment: quiz-activity-deployment

```
PS C:\Users\HP\Dropbox\University\Semester 5\Software Construction & Deployment\Activities\Quiz Activity 2\SDC_QuizActivity-2> kubectl get deployments
NAME           READY   UP-TO-DATE   AVAILABLE   AGE
cicd-demo-deployment   2/2     2           2           10d
quiz-activity-deployment 2/2     2           2           8m42s
PS C:\Users\HP\Dropbox\University\Semester 5\Software Construction & Deployment\Activities\Quiz Activity 2\SDC_QuizActivity-2> kubectl get pods
NAME           READY   STATUS    RESTARTS   AGE
cicd-demo-deployment-8dcc4b9b7-45vxf   1/1     Running   1 (147m ago)   10d
cicd-demo-deployment-8dcc4b9b7-ccgn4   1/1     Running   1 (147m ago)   10d
quiz-activity-deployment-6979d78c79-p5cct 1/1     Running   0            8m51s
quiz-activity-deployment-6979d78c79-zk9p6  1/1     Running   0            8m51s
```

## Git commit

Commit 8f84313

BSSE23043 committed now

Test commit

main

1 parent: 74d443d commit 8f84313

1 file changed +1-1 lines changed

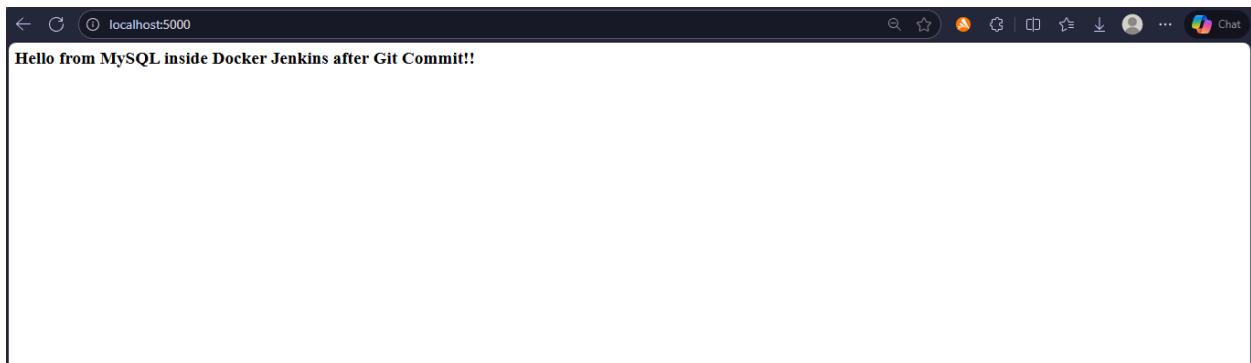
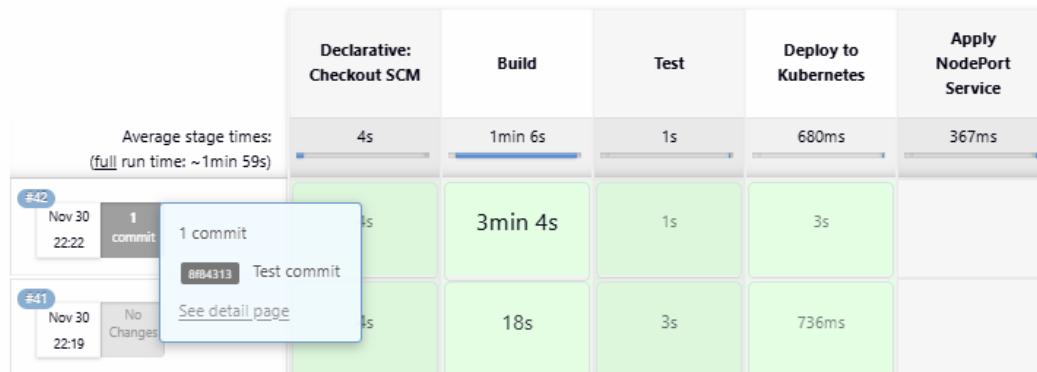
app/app.py

```
@@ -15,7 +15,7 @@ def home():
15   15         database='studentdb'
16   16     )
17   17     cursor = conn.cursor()
18 -   -
18 +   +
cursor.execute("SELECT 'Hello from MySQL inside Docker Jenkins!'")
cursor.execute("SELECT 'Hello from MySQL inside Docker Jenkins after Git Commit!'")
result = cursor.fetchone()
conn.close()
return f"<h2>{result[0]}</h2>"
```

Search within code

Filter files...

## After the git commit



## **GitHub Repository Link:**

[https://github.com/BSSE23043/SDC\\_QuizActivity-2.git](https://github.com/BSSE23043/SDC_QuizActivity-2.git)

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## **GROUP MEMBERS:**

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BSSE23069 – NUMAN TAHIR

BSSE23085 – LAIBA AHMAD

BSSE23099 – MANAL RANA