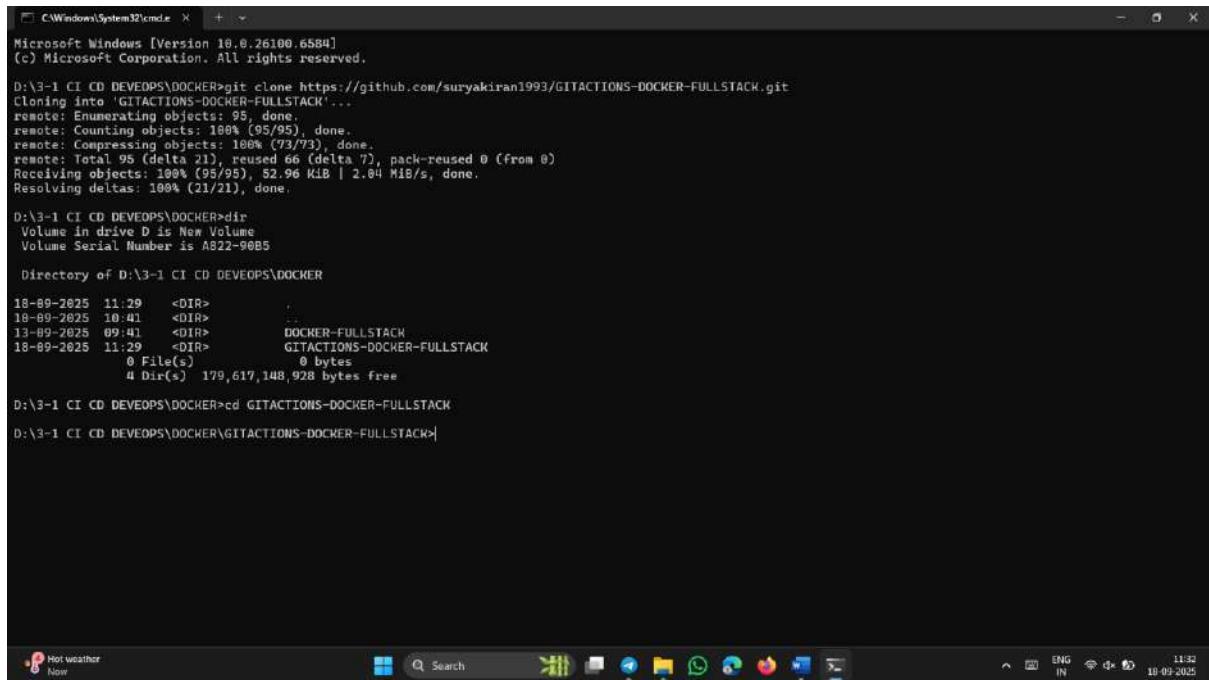


## LAB 10 GIT ACTIONS

- >Deployment of docker full stack project using git actions.
- >git actions used for automatic deployment of image when there is change in the existing code no need of manual build of images again
- >Cloning existing repository
- >dir (to check directories)
- >cd GIT\_ACTIONS-DOCKER-FULLSTACK (changing dir)



```
C:\Windows\System32\cmd.exe | + - Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

D:\3-1 CI CD DEVEOPS\DOCKER>git clone https://github.com/suryakiran1993/GIT_ACTIONS-DOCKER-FULLSTACK.git
Cloning into 'GIT_ACTIONS-DOCKER-FULLSTACK'...
remote: Enumerating objects: 95, done.
remote: Counting objects: 100% (95/95), done.
remote: Compressing objects: 100% (73/73), done.
remote: Total 95 (delta 21), reused 66 (delta 7), pack-reused 0 (from 0)
Receiving objects: 100% (95/95), 52.96 KiB | 2.04 MiB/s, done.
Resolving deltas: 100% (21/21), done.

D:\3-1 CI CD DEVEOPS\DOCKER>dir
 Volume in drive D is New Volume
 Volume Serial Number is A822-90B5

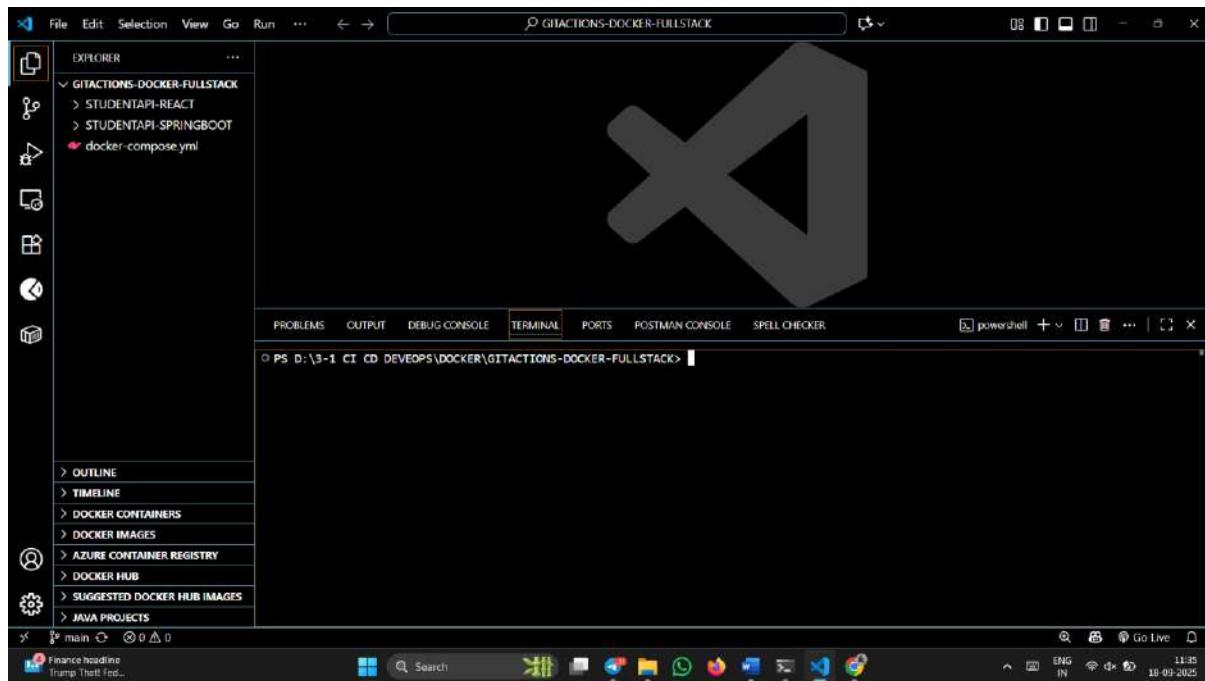
 Directory of D:\3-1 CI CD DEVEOPS\DOCKER

18-09-2025 11:29    <DIR>   .
18-09-2025 10:41    <DIR>   ..
13-09-2025 09:41    <DIR>   DOCKER-FULLSTACK
18-09-2025 11:29    <DIR>   GIT_ACTIONS-DOCKER-FULLSTACK
        0 File(s)          0 bytes
        4 Dir(s)  179,617,148,928 bytes free

D:\3-1 CI CD DEVEOPS\DOCKER>cd GIT_ACTIONS-DOCKER-FULLSTACK

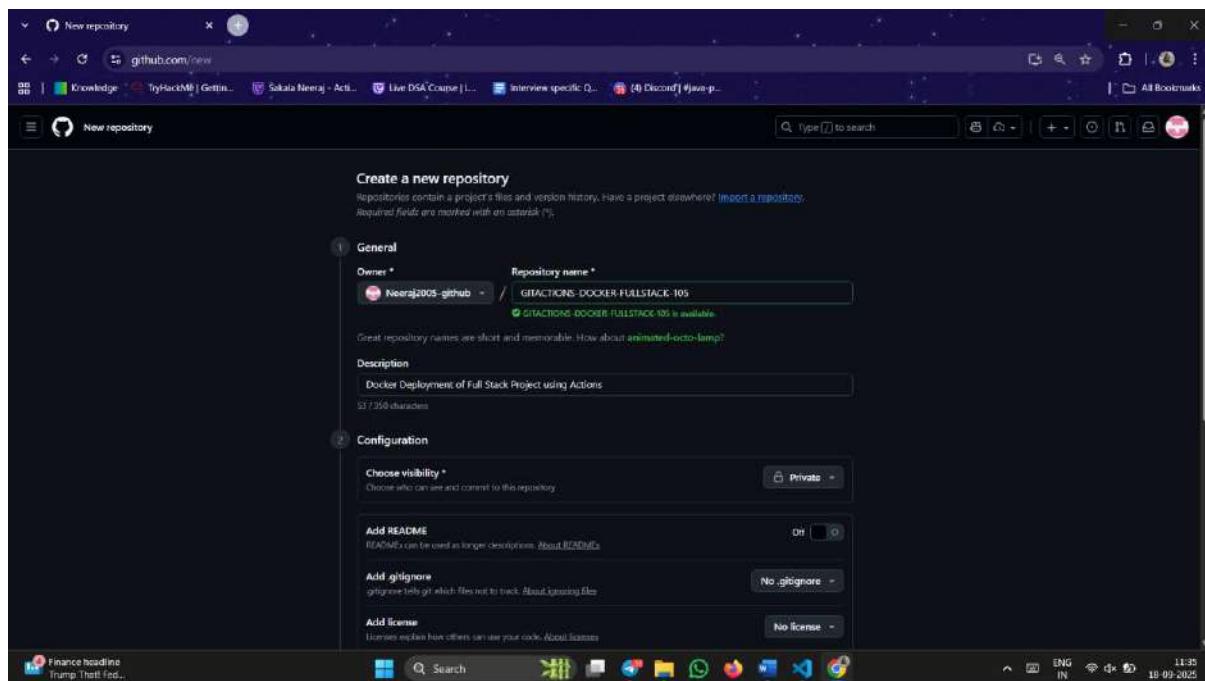
D:\3-1 CI CD DEVEOPS\DOCKER\GIT_ACTIONS-DOCKER-FULLSTACK>
```

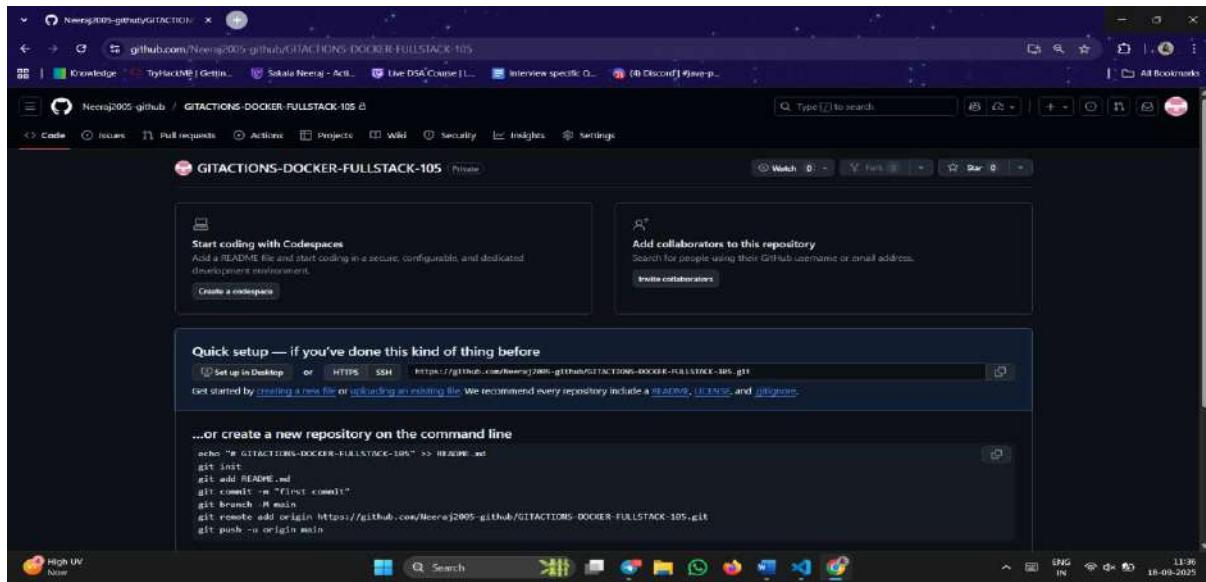
->project opened in vscode containing folders frontend with frontend.Dockerfile, backend with backend.Dockerfile and docker-compose.yml file



->Created a git repository name GITACtIONS-DOCKER-FULLSTACK-105

->visibility public





->Add the project from local to my git repository

->git remote remove origin (remove old origin)

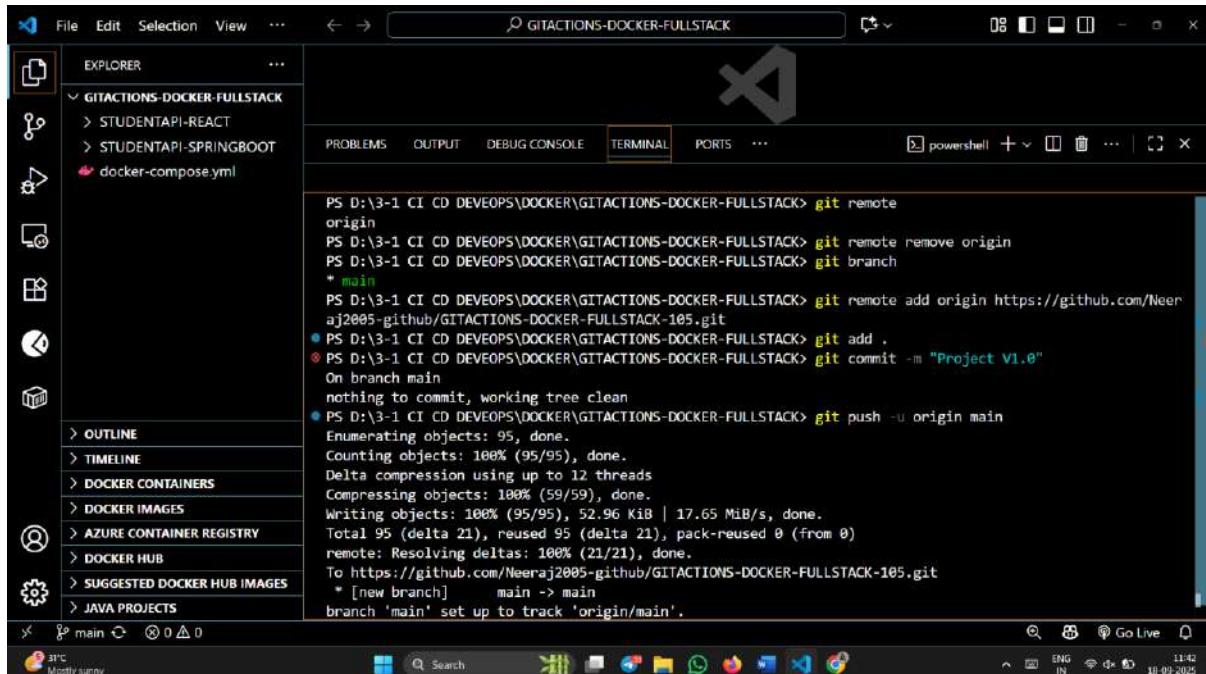
-> git add . (add files to staging area)

->git commit -m "" (commit message)

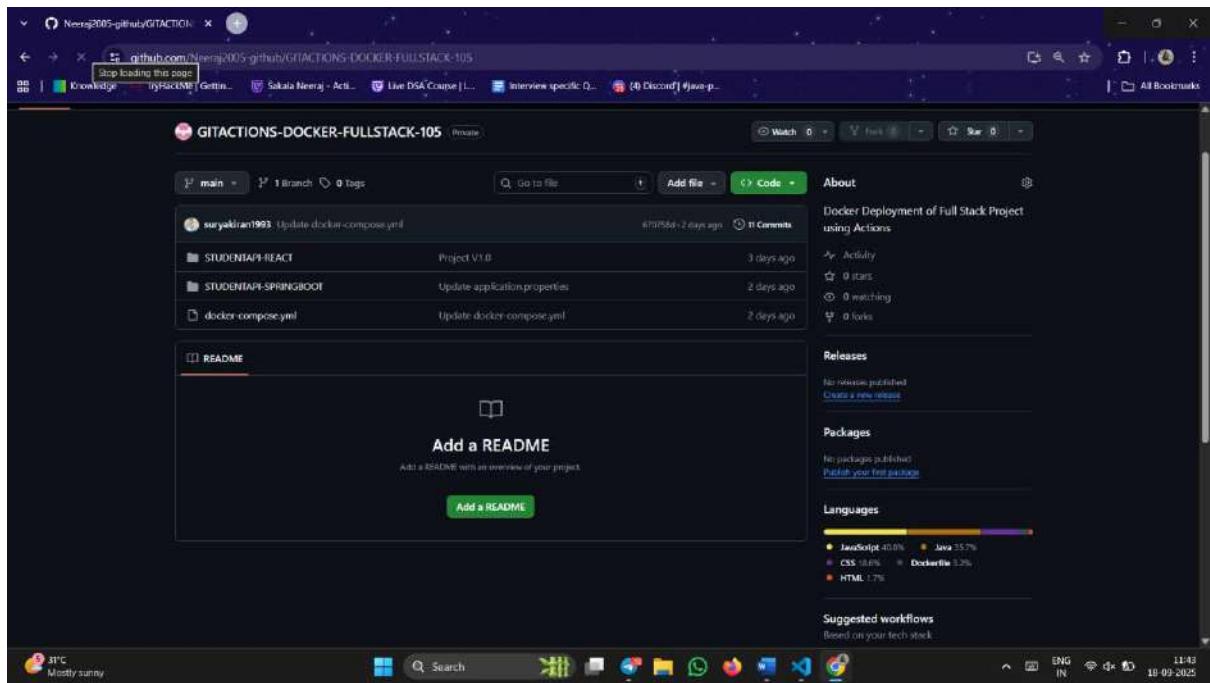
->git remote add origin ""(add to origin) and make sure to be in main branch (git branch )

->git branch -m main

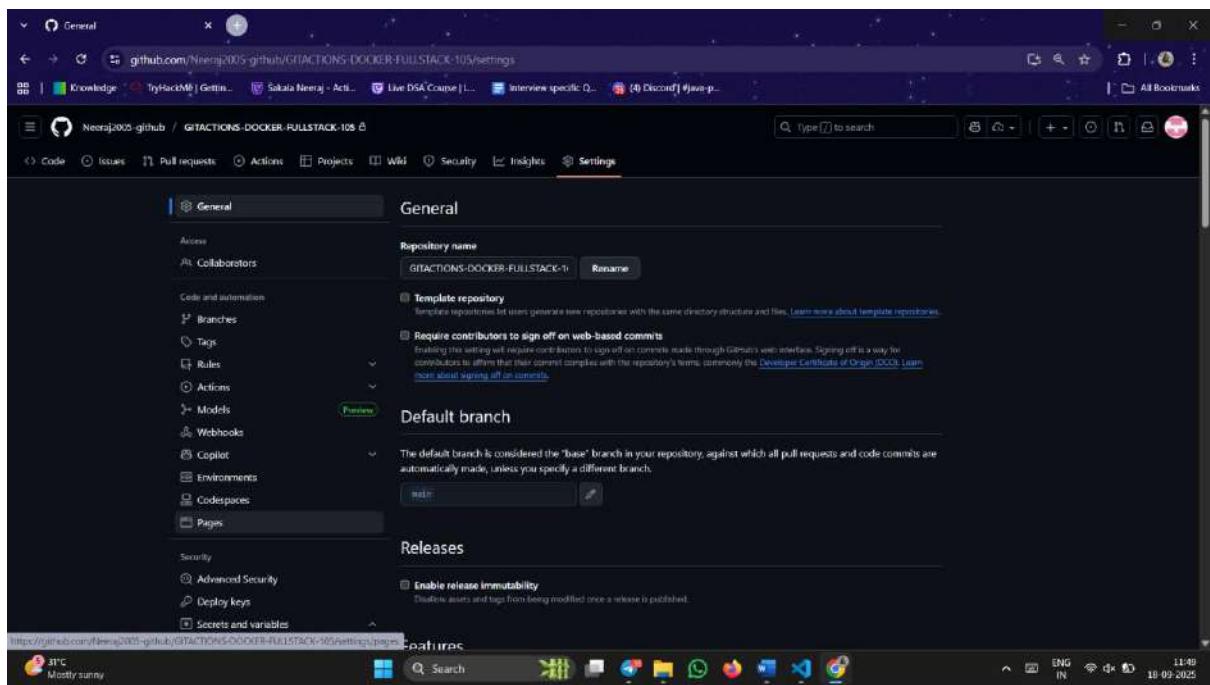
->git push -u origin main (git push)



->github repo with project



Setting->secret and variables->actions (to add secret variables)



->New repository secret add

The screenshot shows the 'Actions secrets and variables' section of the GitHub repository settings. On the left, a sidebar lists repository features like Code and automations, Branches, Tags, Rules, Actions, Models, Webhooks, Copilot, Environments, Codespaces, and Pages. The 'Actions' section is currently selected. The main area is titled 'Actions secrets and variables'. It contains two tabs: 'Secrets' (selected) and 'Variables'. Under 'Secrets', it says 'This environment has no secrets.' and has a 'Manage environment secrets' button. Under 'Variables', it says 'This repository has no secrets.' and has a 'New repository secret' button. A preview section at the bottom shows a single secret named 'neeraj2005'.

->Add dockerhub username as secretvariable with secret name as DOCKERHUB\_USERNAME (can add any name but need to change in docker-image.yml)

The screenshot shows the 'Actions secrets / New secret' page. The 'Name' field is filled with 'DOCKERHUB\_USERNAME'. The 'Secret' field contains the value 'neeraj2005'. A green 'Add secret' button is visible at the bottom. The left sidebar is identical to the previous screenshot, showing the 'Actions' section is selected. The preview section at the bottom shows the secret 'neeraj2005' under the 'DOCKERHUB\_USERNAME' key.

->secret variable DOCKERHUB\_USERNAME added

The screenshot shows the GitHub Actions secrets and variables settings page. On the left, there's a sidebar with options like General, Access, Collaborators, Code and automation, Branches, Tags, Rules, Actions, Models, Webhooks, Copilot, Environments, Codespaces, Pages, Security, Advanced Security, Deploy keys, Secrets and variables, and Actions. The main area is titled "Actions secrets and variables". It has tabs for "Secrets" and "Variables", with "Secrets" selected. A sub-section titled "Environment secrets" shows a message: "This environment has no secrets." Below it is a "Manage environment secrets" button. Another section titled "Repository secrets" shows a table with one row: Name: DOCKERHUB\_USERNAME, Last updated: now, and a "New repository secret" button.

->Dockerhub ->profile->Account settings->Personal access tokens

The screenshot shows the Docker Hub profile page for user "neeraj2005". The left sidebar includes options like Explore, My Hub, Repositories, Collaborations, Settings, Default privacy, Notifications, Billing, Usage, Pulls, and Storage. The main area is titled "Repositories" and lists two repositories: "neeraj2005/springboot-app" (last pushed 7 days ago) and "neeraj2005/my-reactapp" (last pushed 19 days ago). To the right, there's a sidebar for "neeraj2005" with sections for "What's new", "My profile", "Account settings", and "Sign out". The status bar at the bottom indicates "11:35 IN 18-09-2025".

The screenshot shows the 'Account information' section of the Docker Hub settings. The left sidebar shows 'NEERAJ SAKALA' under 'Docker Personal'. The main area has a heading 'Account information' with a note: 'This information will be visible to all users of Docker.' It contains fields for 'Full name' (NEERAJ SAKALA), 'Company', 'Location', 'Website', and 'Gravatar email'. Buttons for 'Cancel' and 'Save' are at the bottom.

->Personal access tokens and Create a new token with description and expiration date , make sure give Write,Read and Delete ->Generate

The screenshot shows the 'Create access token' page. The left sidebar shows 'NEERAJ SAKALA' under 'Docker Personal'. The main area has a heading 'Create access token' with a note: 'A personal access token is similar to a password except you can have many tokens and revoke access to each one at any time.' It has fields for 'Access token description' (DOCKER FULL STACK), 'Expiration date' (None), and 'Optional Access permissions' (Read, Write, Delete). A note below says 'Read, Write, Delete tokens allow you to manage your repositories.' Buttons for 'Cancel' and 'Generate' are at the bottom.

The screenshot shows the Docker Personal access tokens page. On the left, there's a sidebar with options like Home, Hub, Build Cloud, Scout, Testcontainers Cloud, Docker Desktop, Settings, Account information, Email, Password, 2FA, and Personal access tokens (which is selected). The main area has a heading "Personal access tokens" with a sub-instruction: "You can use a personal access token instead of a password for Docker CLI authentication. Create multiple tokens, control their scope, and delete tokens at any time." A "Generate new token" button is visible. Below is a table with one row of data:

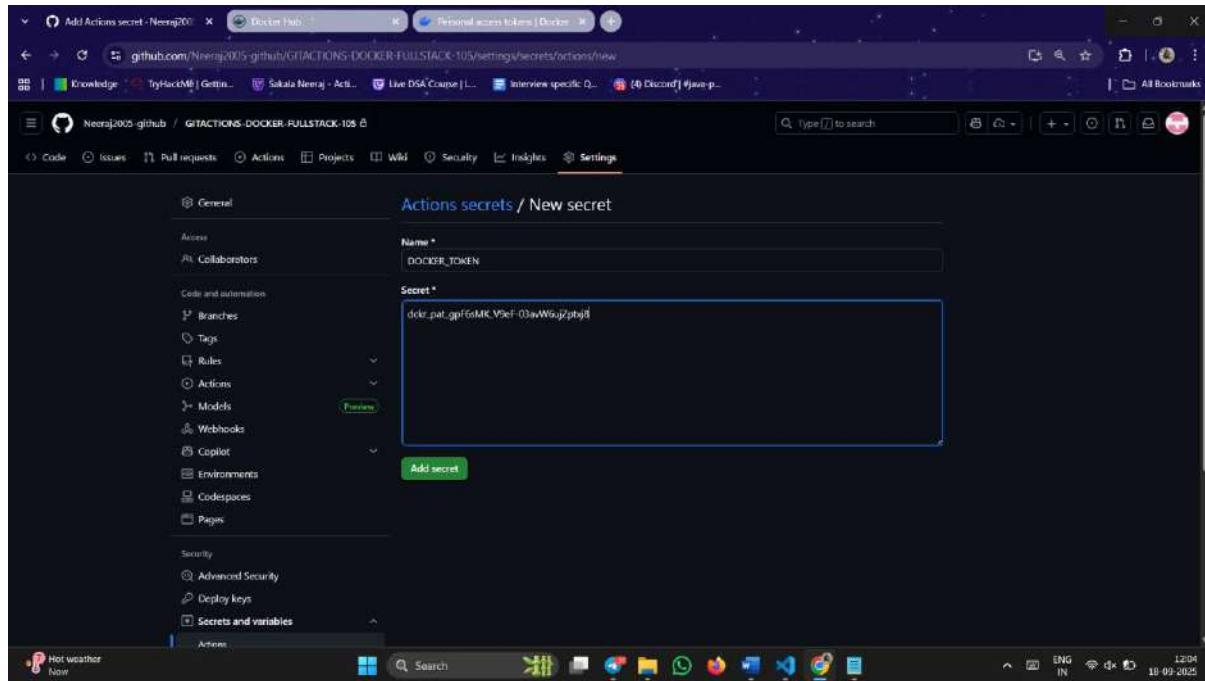
Description	Scope	Status	Source	Created	Last used	Expiration date
Generated through desktop...	Read, Write, Delete	Active	Auto-generated	Aug 23, 2025 at 11:15:23	Sep 17, 2025 at 21:31:54	Never

At the bottom, there are buttons for "Rows per page" (set to 10), "1-1 of 1", and a "More" dropdown.

->copy the personal access token for adding as secret variable token

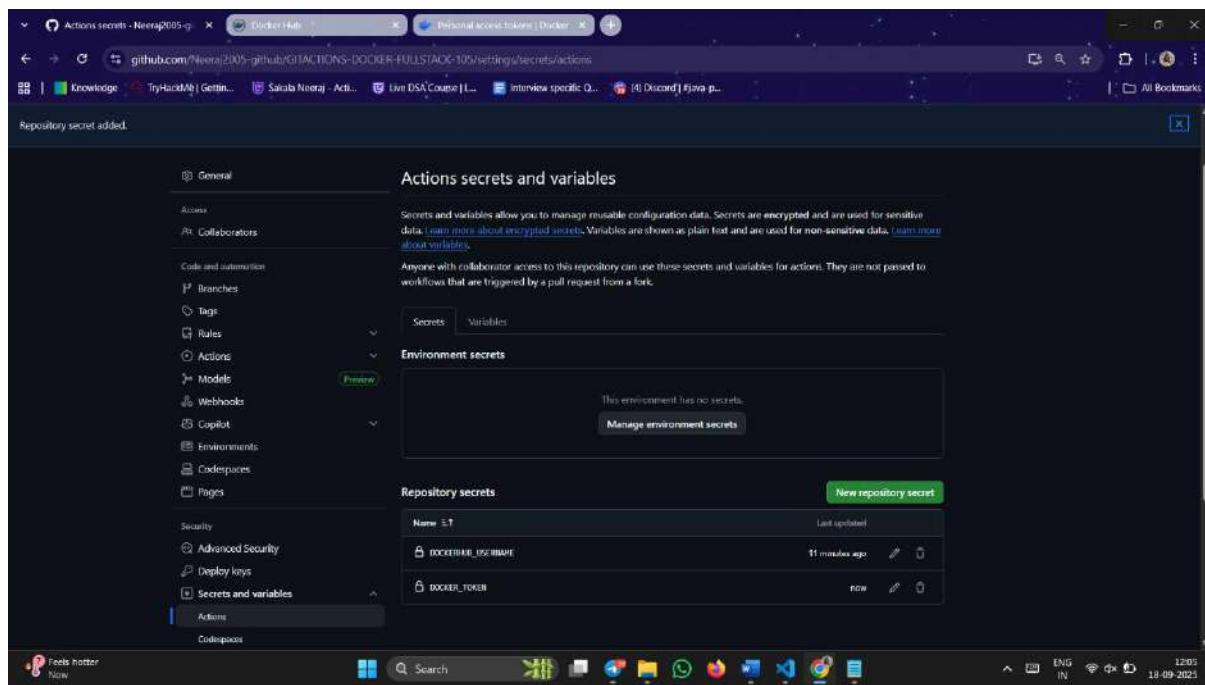
The screenshot shows the "Copy access token" page. The sidebar is identical to the previous one. The main content is titled "Copy access token" with a note: "Use this token as a password when you sign in from the Docker CLI client." It includes a warning: "Make sure you copy your personal access token now. Your personal access token is only displayed once. It isn't stored and can't be retrieved later." Below are fields for "Access token description" (set to "DOCKER FULL STACK"), "Expires on" (set to "Never"), and "Access permissions" (set to "Read, Write, Delete"). There are two sections for "To use the access token from your Docker CLI client": 1. Run a command: `$ docker login -u neeraj2005` with a "Copy" button. 2. At the password prompt, enter the personal access token: `dckr_pat_gpF6sMK_V9eF-23av#6uJ2ptxj8` with a "Copy" button. At the bottom are "Back to access tokens" and "Airplane mode on" buttons.

->Add the copied token to secret variable as DOCKERHUB\_SECRET properly without any space.



The screenshot shows the 'Actions secrets / New secret' page on GitHub. The 'Name' field is filled with 'DOCKER\_TOKEN'. The 'Secret' field contains the copied Docker Hub token: 'dclr.pat.gpF6sMK.V9cf-03avWlsqzpbq8'. A green 'Add secret' button is at the bottom right of the secret input area.

->Add secret



The screenshot shows the 'Actions secrets and variables' page. It displays two sections: 'Environment secrets' (empty) and 'Repository secrets'. Under 'Repository secrets', there are two entries: 'DOCKERHUB\_SECRET' (last updated 11 minutes ago) and 'DOCKER\_TOKEN' (last updated now). A green 'New repository secret' button is located at the top right of the repository secrets table.

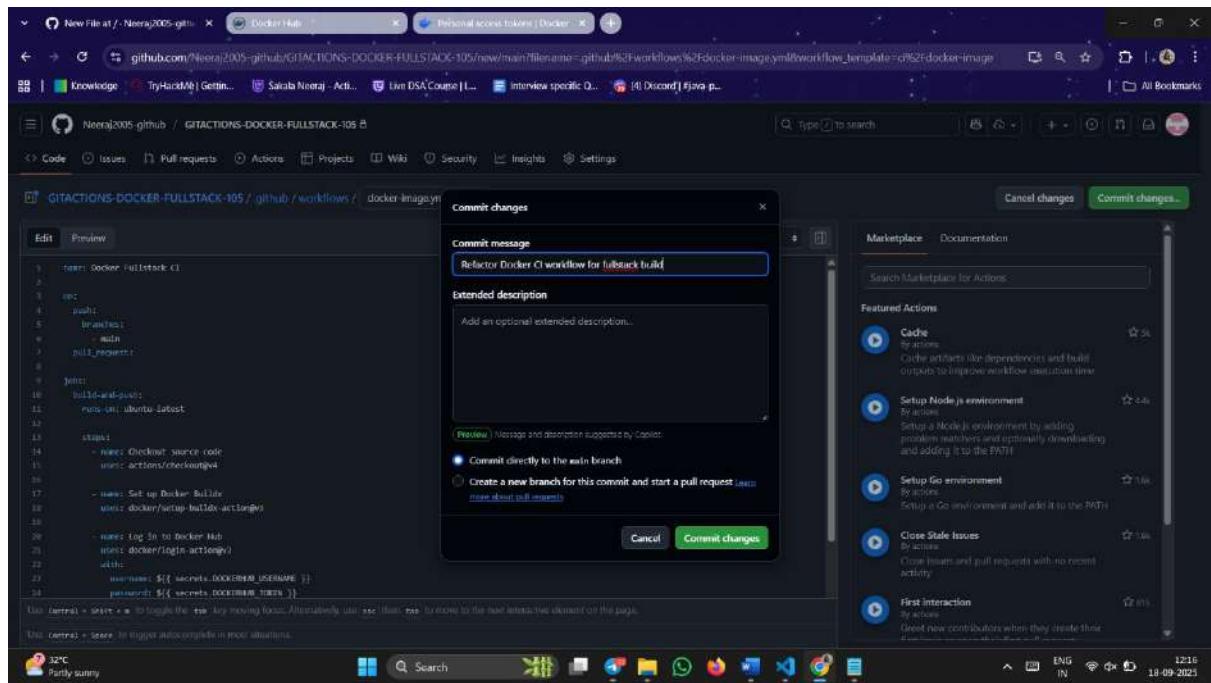
->Actions and configure Docker image as below:

The screenshot shows the 'Get started with GitHub Actions' page. It features a search bar at the top and a section titled 'Suggested for this repository'. This section contains six cards: 'Docker image' (Configure, Dockerfile), 'Publish Node.js Package to GitHub Packages' (Configure, JavaScript), 'Publish Java Package with Maven' (Configure, Java), 'Jekyll using Docker Image' (Configure, HTML), 'Publish Node.js Package' (Configure, JavaScript), and 'Java with Maven' (Configure, Java). Below this is a 'Deployment' section with four cards: 'Deploy a container to an... (Configure)', 'Deploy to Amazon ECS' (Configure, AWS Lambda), 'Build and Deploy to GKE' (Configure, Google Cloud Platform), and 'Deploy to Alibaba Cloud ACK' (Configure, Alibaba Cloud). At the bottom right, there is a 'View all' link.

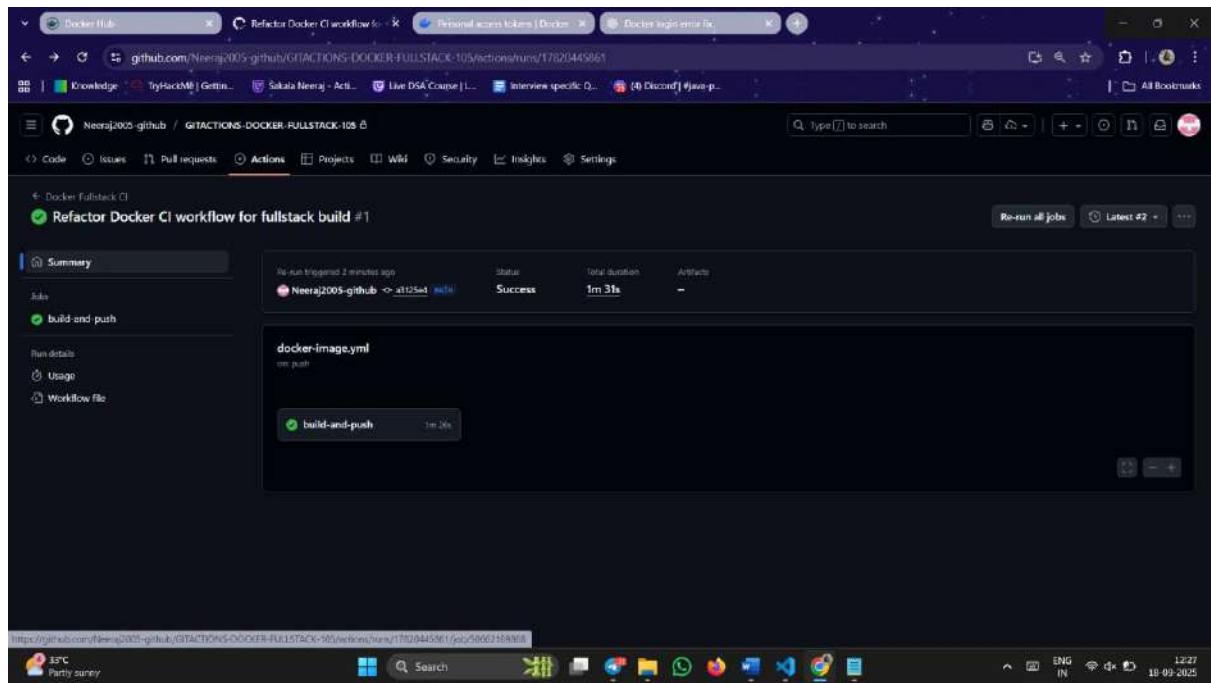
->The configured .yml file with secret variables and dockerhub username make sure to be correct names of variables created and image name

The screenshot shows the GitHub Actions workflow editor for the 'GIT ACTIONS-DOCKER-FULLSTACK-105' repository. The left pane displays the workflow file content:name: Docker Fullstack CI
on:
 push:
 branches:
 - main
 pull\_request:
 jobs:
 build-and-push:
 runs-on: ubuntu-latest
 steps:
 - name: Checkout source code
 uses: actions/checkout@v4
 - name: Set up Docker Buildx
 uses: docker/setup-buildx-action@v1
 - name: Log in to Docker Hub
 uses: docker/login-action@v2
 with:
 username: \${{ secrets.DOCKERHUB\_USERNAME }}
 password: \${{ secrets.DOCKERHUB\_TOKEN }}Below the code editor, there are instructions for keyboard navigation and a note about triggering autocomplete. The right pane includes a 'Marketplace' sidebar with a search bar and a list of featured actions, such as 'Cache', 'Setup Node.js environment', 'Setup Go environment', 'Close stale issues', and 'First interaction'.

->commit changes



->go to actions and check for successful build



->Check images build in docker hub using git actions

The screenshot shows a Microsoft Edge browser window displaying the Docker Hub interface. The URL is [hub.docker.com/repositories/neeraj2005/](https://hub.docker.com/repositories/neeraj2005/). The left sidebar shows the user's profile and navigation options like Explore, My Hub, Repositories, Collaborations, Settings, etc. The main area is titled 'Repositories' and lists four public repositories: 'neeraj2005/docker-frontend', 'neeraj2005/docker-backend', 'neeraj2005/springboot-app', and 'neeraj2005/my-reactapp'. Each repository entry includes the name, last pushed time, visibility (Public), and status (Inactive). A 'Create a repository' button is visible at the top right of the list.

->in docker-compose.yml make sure username is correct for frontend image name

The screenshot shows a Microsoft Visual Studio Code (VS Code) window with the title bar 'GIT ACTIONS-DOCKER-FULLSTACK'. The left sidebar shows a project structure with 'STUDENTAPI-REACT', 'STUDENTAPI-SPRINGBOOT', '.mvn', 'src', '.gitattributes', '.gitignore', 'backend.Dockerfile', 'mvnw', 'mvnw.cmd', and 'pom.xml'. The main editor area displays the 'docker-compose.yml' file. The file defines two services: 'backend' and 'frontend'. The 'backend' service uses the image 'neeraj2005/docker-backend:latest', maps port 5000 to 33800, and depends on the 'mysql' network. The 'frontend' service uses the image 'survakiran1993/docker-frontend:latest', maps port 3000 to 80, and depends on the 'springboot-mysql-net' network. The code is syntax-highlighted with line numbers from 1 to 21.

->in docker-compose.yml make sure username is correct for backend image name

```

version: '3.8'
services:
  backend:
    image: neeraj2005/docker-backend:latest
    container_name: springboot
    ports:
      - "2025:2000"
    depends_on:
      - mysql
    restart: on-failure
    networks:
      - springboot-mysql-net
  frontend:
    image: neeraj2005/docker-frontend:latest
    container_name: react
    ports:
      - "3000:80"
    depends_on:
      - backend
    restart: on-failure
  mysql:
    image: mysql:8.0
    container_name: mysql
    environment:
      MYSQL_ROOT_PASSWORD: password
      MYSQL_DATABASE: mydb
    ports:
      - "3306:3306"
    networks:
      - springboot-mysql-net
networks:
  springboot-mysql-net:
    driver: bridge

```

->As Configured image.yml in git repo we need to git pull first in local repo to push updated code as it create merge conflict .

->And then push the updated code

```

PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACITONS-DOCKER-FULLSTACK> git merge origin/main
.gitgithub/workflows/docker-image.yml | 40 ++++++-----+
1 file changed, 40 insertions(+), 40 deletions(-)
create mode 100644 .github/workflows/docker-image.yml
PS D: [Follow link (ctrl + click)] DOCKER\GITACITONS-DOCKER-FULLSTACK> git pull origin main
From https://github.com/Neeraj2005/github/GITACITONS-DOCKER-FULLSTACK-105
 * branch            main       -> FETCH_HEAD
Already up to date.
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACITONS-DOCKER-FULLSTACK> git push origin main
Enumerating objects: 9, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 12 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 573 bytes | 286.00 KiB/s, done.
Total 5 (delta 3), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
To https://github.com/Neeraj2005/github/GITACITONS-DOCKER-FULLSTACK-105.git
  a3125e4..37523a2 main -> main
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACITONS-DOCKER-FULLSTACK>

```

->we can see the updated code started actions after push without any manual deployment

The screenshot shows a web browser window with multiple tabs open. The active tab is 'Workflow runs - Neeraj2005-github' on GitHub. The page displays the 'Actions' section for the repository 'Neeraj2005-github/GIT-ACTIONS-DOCKER-FULLSTACK-105'. The left sidebar shows management options like Caches, Attestations, Runners, Usage metrics, and Performance metrics. The main content area shows 'All workflows' with two workflow runs listed:

Workflow	Branch	Last Run
Merge remote-tracking branch 'origin/main'	main	2 minutes ago 1m 5s
Refactor Docker CI workflow for fullstack build	main	24 minutes ago 1m 31s

The browser's status bar at the bottom indicates the date and time as '18-09-2025 12:41'.

The screenshot shows a Java development environment with two windows side-by-side.

**Left Window:**

- Explorer View:** Shows the project structure under "GITACCTIONS-DOCKER-FULLSTACK".
- Code Editor:** Displays the "StudentController.java" file with the following code:

```
STUDENTAPI-SPRINGBOOT > src > main > java > com > klef > dev > controller > StudentController.java
17 public class StudentController {
18     @Autowired
19     private StudentService studentService;
20     @GetMapping("/docker")
21     public String docker() {
22         return "Docker Full Stack Deployment Demo with Git Actions";
23     }
24     @GetMapping("/")
25     public String home() {
26         return "Docker-Backend is Running";
27     }
28
29     @PostMapping("/add")
30     public ResponseEntity<Student> addStudent(@RequestBody Student student) {
31         Student savedStudent = studentService.addStudent(student);
32     }
33
34 }
```

**Terminal View:** Shows the command line interface with the following output:

```
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACCTIONS-DOCKER-FULLSTACK>
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACCTIONS-DOCKER-FULLSTACK>
```

**Right Window:**

- Explorer View:** Shows the project structure under "GITACCTIONS-DOCKER-FULLSTACK".
- Code Editor:** Displays the "StudentController.java" file with the same code as the left window.
- Terminal View:** Shows the command line interface with the following output:

```
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACCTIONS-DOCKER-FULLSTACK> git commit -m "Project v2.0"
[main ee8cc22] Project v2.0
 1 file changed, 6 insertions(+), 2 deletions(-)
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACCTIONS-DOCKER-FULLSTACK>
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACCTIONS-DOCKER-FULLSTACK>
```

The screenshot shows a developer's desktop environment with two main windows open:

- VS Code (Top Window):** The title bar says "GITACTIONS-DOCKER-FULLSTACK". The Explorer sidebar shows a project structure under "GITACTIONS-DOCKER-FULLSTACK" with subfolders like ".mvn", "src", "main", "java\com\klef\dev", and "controller". The "controller" folder contains files such as "StudentController.java", "entity", "repository", "service", and "SpringBootProjectAppl...". The "StudentController.java" file is open in the editor, showing Java code for a Spring Boot controller. The terminal tab shows a PowerShell session with the command "git push -u origin main" and its output, which includes "Enumerating objects: 21, done.", "Counting objects: 100% (21/21), done.", "Delta compression using up to 12 threads", "Compressing objects: 100% (8/8), done.", "Writing objects: 100% (11/11), 825 bytes | 412.00 KiB/s, done.", "Total 11 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)", "remote: Resolving deltas: 100% (4/4), completed with 4 local objects.", "To https://github.com/Neeraj2005/github/GITACTIONS-DOCKER-FULLSTACK-105.git", and "37523a2..ee8cc22 main -> main". Below the terminal, a message says "branch 'main' set up to track 'origin/main'." The status bar at the bottom of VS Code shows "Neeraj (now)" and the date "20-09-2025".
- Browser (Bottom Window):** The address bar shows "github.com/Neeraj2005/github/GITACTIONS-DOCKER-FULLSTACK-105". The page displays the GitHub repository for "GITACTIONS-DOCKER-FULLSTACK-105". It shows a list of commits, including "Refactor Docker CI workflow for fullstack build" (2 days ago), "Project V1.0" (5 days ago), "Project v2.0" (2 minutes ago), and "updated docker-image.yml" (2 days ago). The repository has 15 commits and 0 stars. It also shows sections for "About", "Releases", "Packages", and "Languages". The "Languages" section indicates a mix of JavaScript, Java, CSS, Dockerfile, and HTML. The status bar at the bottom of the browser shows "Sunny" and the date "20-09-2025".

The screenshot shows a desktop interface with two main windows:

- Top Window (Browser):** A Microsoft Edge browser window titled "Workflow runs - Neeraj2005-g...". The URL is "github.com/Neeraj2005-github/GITACCTIONS-DOCKER-FULLSTACK-105/actions". The page displays a list of workflow runs for the "Docker Fullstack CI" repository. There are three runs listed:
  - Project v2.0**: Triggered by a push from the "main" branch, completed 7 minutes ago with a status of "Success".
  - Merge remote-tracking branch 'origin/main'**: Triggered by a push from the "main" branch, completed 1m 48s ago with a status of "Success".
  - Refactor Docker CI workflow for fullstack build**: Triggered by a push from the "main" branch, completed 1m 31s ago with a status of "Success".
- Bottom Window (Code Editor):** A Visual Studio Code (VS Code) window titled "GITACCTIONS-DOCKER-FULLSTACK". The current file is "StudentController.java" located in the "STUDENTAPI-SPRINGBOOT/src/main/java/com/klef/dev/controller" directory. The code editor shows the following Java code:

```
17 public class StudentController {  
18     @Autowired  
19 }
```

The terminal tab in VS Code shows the output of a Docker compose command:

```
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACCTIONS-DOCKER-FULLSTACK> docker compose up -d  
[+] Running 5/5  
✓ frontend Pulled  
✓ 7d82f3ad3b43 Pull complete  
✓ backend Pulled  
✓ 7a4391ba01b6 Pull complete  
✓ e15ae6e6fc8a Pull complete  
[+] Running 5/5  
✓ Network gitactions-docker-fullstack.springboot-mysql-net Created  
✓ Volume "gitactions-docker-fullstack_mysql_data" Created  
✓ Container mysql-db Started  
✓ Container springboot Started  
✓ Container react Started
```

The image shows two side-by-side screenshots of a Java development environment, likely IntelliJ IDEA, displaying a project named "GITACTIONS-DOCKER-FULLSTACK".

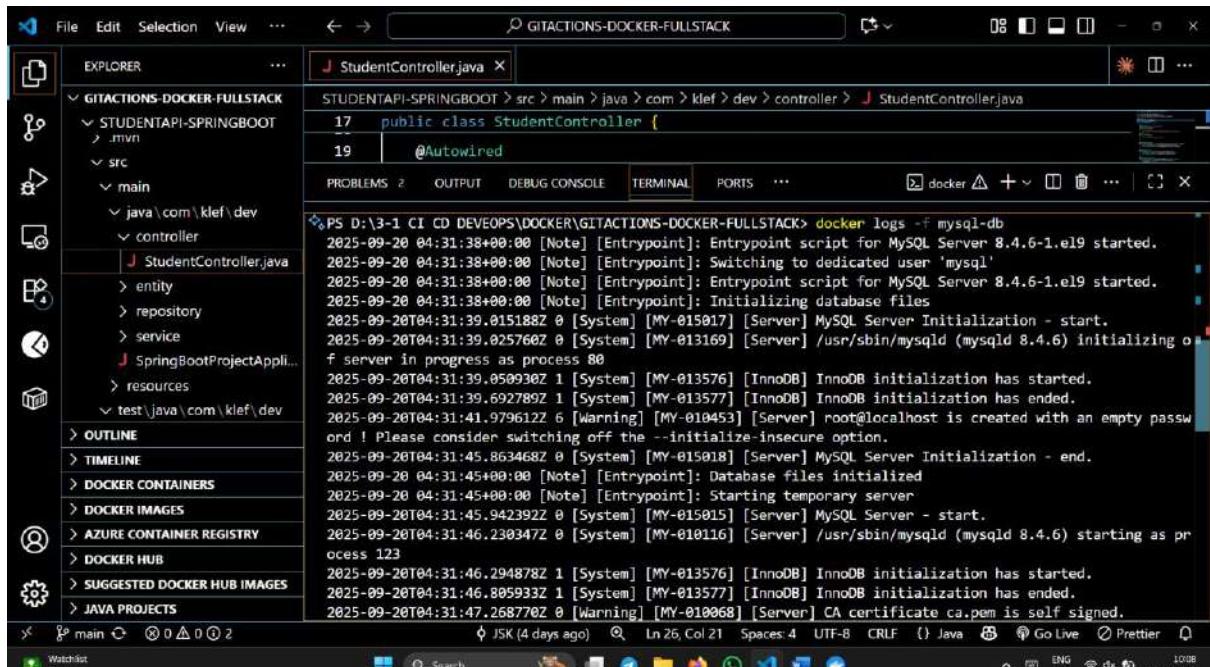
**Top Screenshot:**

- Terminal Output:**

```
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACTIONS-DOCKER-FULLSTACK> docker compose up -d
[+] Running 5/5
  ✓ frontend Pulled
  ✓ backend Pulled
  ✓ mysql Pulled
  ✓ react Pulled
  ✓ Network gitactions-docker-fullstack.springboot-mysql-net Created
  ✓ Volume "gitactions-docker-fullstack_mysql_data" Created
  ✓ Container mysql-db Started
  ✓ Container springboot Started
  ✓ Container react Started
12.3s
1.9s
60.0s
50.6s
2.3s
[+] Running 5/5
  ✓ Network gitactions-docker-fullstack.springboot-mysql-net Created
  ✓ Volume "gitactions-docker-fullstack_mysql_data" Created
  ✓ Container mysql-db Started
  ✓ Container springboot Started
  ✓ Container react Started
0.1s
0.0s
1.1s
1.3s
1.6s
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACTIONS-DOCKER-FULLSTACK> docker-compose down -v
[+] Running 5/5
  ✓ Container react Removed
  ✓ Container springboot Removed
  ✓ Container mysql-db Removed
  ✓ Network gitactions-docker-fullstack.springboot-mysql-net Removed
  ✓ Volume gitactions-docker-fullstack_mysql_data Removed
0.5s
0.5s
1.7s
0.3s
0.0s
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACTIONS-DOCKER-FULLSTACK>
```
- Bottom Screenshot:** A second instance of the same IDE showing the same terminal output.

**IDE UI Elements:**

- Explorer:** Shows the project structure under "GITACTIONS-DOCKER-FULLSTACK".
- Editor:** Displays the code for "StudentController.java".
- Terminal:** Shows the command-line interface for running Docker compose commands.
- Bottom Bar:** Includes icons for file operations, search, and system status.

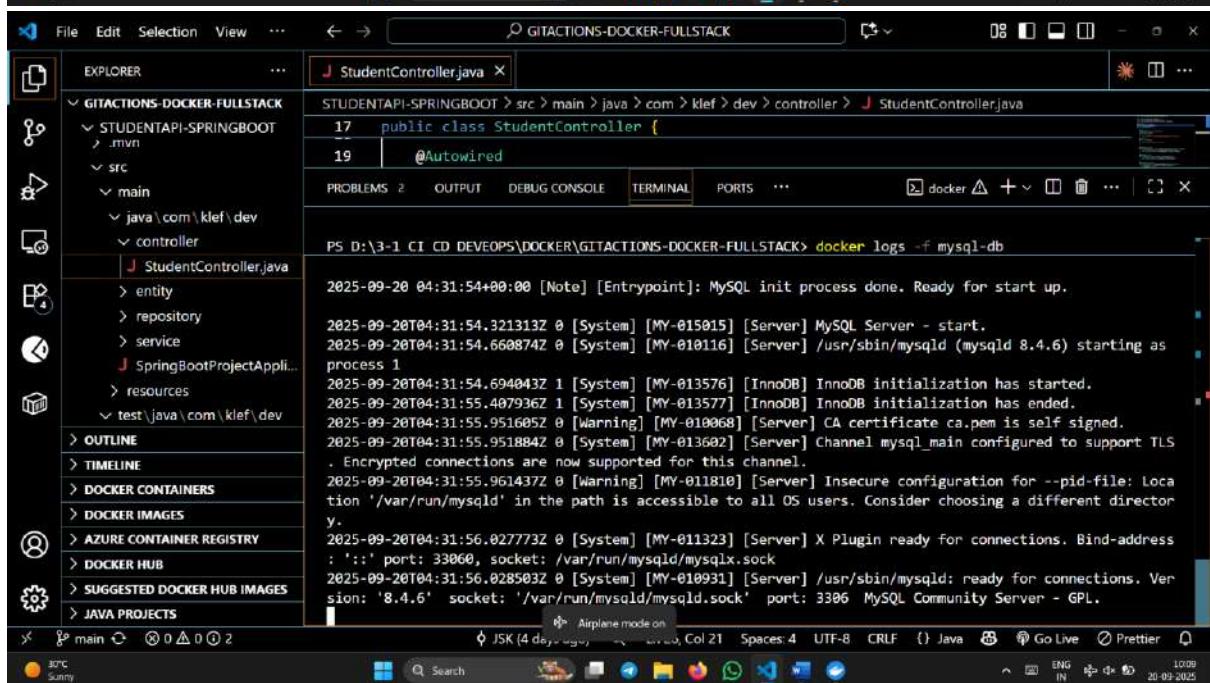


The screenshot shows the VS Code interface with the title bar "GITACCTIONS-DOCKER-FULLSTACK". The Explorer sidebar on the left shows a project structure under "GITACCTIONS-DOCKER-FULLSTACK" with "STUDENTAPI-SPRINGBOOT" and ".mvn" folders expanded, and "src" further expanded to show "main", "java", "com", "klef", "dev", "controller", and "StudentController.java". The main editor area displays the code for "StudentController.java". Below the editor is a terminal window showing the command "PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACCTIONS-DOCKER-FULLSTACK> docker logs -f mysql-db" and its output, which details the MySQL server's initialization process.

```

PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACCTIONS-DOCKER-FULLSTACK> docker logs -f mysql-db
2025-09-20 04:31:38+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.4.6-1.el9 started.
2025-09-20 04:31:38+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
2025-09-20 04:31:38+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.4.6-1.el9 started.
2025-09-20 04:31:38+00:00 [Note] [Entrypoint]: Initializing database files
2025-09-20T04:31:39.015188Z 0 [System] [MY-015017] [Server] MySQL Server Initialization - start.
2025-09-20T04:31:39.025760Z 0 [System] [MY-013169] [Server] /usr/sbin/mysqld (mysqld 8.4.6) initializing o...
f server in progress as process 88
2025-09-20T04:31:39.058930Z 0 [System] [MY-013576] [InnoDB] InnoDB initialization has started.
2025-09-20T04:31:39.692789Z 1 [System] [MY-013577] [InnoDB] InnoDB initialization has ended.
2025-09-20T04:31:41.979612Z 6 [Warning] [MY-010453] [Server] root@localhost is created with an empty passw...
ord ! Please consider switching off the --initialize-insecure option.
2025-09-20T04:31:45.863468Z 0 [System] [MY-015018] [Server] MySQL Server Initialization - end.
2025-09-20 04:31:45+00:00 [Note] [Entrypoint]: Database files initialized
2025-09-20 04:31:45+00:00 [Note] [Entrypoint]: Starting temporary server
2025-09-20T04:31:45.942392Z 0 [System] [MY-015015] [Server] MySQL Server - start.
2025-09-20T04:31:46.230347Z 0 [System] [MY-010116] [Server] /usr/sbin/mysqld (mysqld 8.4.6) starting as pr...
cess 123
2025-09-20T04:31:46.294878Z 1 [System] [MY-013576] [InnoDB] InnoDB initialization has started.
2025-09-20T04:31:46.805933Z 1 [System] [MY-013577] [InnoDB] InnoDB initialization has ended.
2025-09-20T04:31:47.268770Z 0 [Warning] [MY-010068] [Server] CA certificate ca.pem is self signed.

```



This screenshot shows the same VS Code environment after the MySQL server has completed its initialization. The terminal output now shows the MySQL server ready to accept connections, indicating the successful completion of the initialization process.

```

PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACCTIONS-DOCKER-FULLSTACK> docker logs -f mysql-db
2025-09-20 04:31:54+00:00 [Note] [Entrypoint]: MySQL init process done. Ready for start up.
2025-09-20T04:31:54.321313Z 0 [System] [MY-015015] [Server] MySQL Server - start.
2025-09-20T04:31:54.660874Z 0 [System] [MY-010116] [Server] /usr/sbin/mysqld (mysqld 8.4.6) starting as pr...
cess 1
2025-09-20T04:31:54.694043Z 1 [System] [MY-013576] [InnoDB] InnoDB initialization has started.
2025-09-20T04:31:55.407936Z 1 [System] [MY-013577] [InnoDB] InnoDB initialization has ended.
2025-09-20T04:31:55.951605Z 0 [Warning] [MY-010068] [Server] CA certificate ca.pem is self signed.
2025-09-20T04:31:55.951884Z 0 [System] [MY-013602] [Server] Channel mysql_main configured to support TLS ...
Encrypted connections are now supported for this channel.
2025-09-20T04:31:55.961437Z 0 [Warning] [MY-011810] [Server] Insecure configuration for --pid-file: loca...
tion '/var/run/mysqld' in the path is accessible to all OS users. Consider choosing a different director...
y.
2025-09-20T04:31:56.027773Z 0 [System] [MY-011323] [Server] X Plugin ready for connections. Bind-address ...
: '::' port: 3306, socket: /var/run/mysqld/mysql.sock
2025-09-20T04:31:56.028503Z 0 [System] [MY-010931] [Server] /usr/sbin/mysqld: ready for connections. Ver...
sion: '8.4.6' socket: '/var/run/mysqld/mysqld.sock' port: 3306 MySQL Community Server - GPL.

```

**File Edit Selection View ...** 🔍 GITACCTIONS-DOCKER-FULLSTACK

**EXPLORER**

- STUDENTAPI-SPRINGBOOT
- .mvn
- src
  - main
    - java\com\klef\dev
    - controller
      - StudentController.java

**PROBLEMS** OUTPUT DEBUG CONSOLE TERMINAL PORTS ...

```
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACCTIONS-DOCKER-FULLSTACK> docker logs -f springboot
    alter table student_table
        add constraint UKd13qo2dhpv1mjsf5qth2em58v unique (student_contact)
Hibernate:
    alter table student_table
        drop index UKoihbv3dej1aoqi896724d7aq4
Hibernate:
    alter table student_table
        add constraint UKoihbv3dej1aoqi896724d7aq4 unique (student_email)
2025-09-20T04:31:57.997Z INFO 1 --- [SpringBootProject] [main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2025-09-20T04:31:58.468Z WARN 1 --- [SpringBootProject] [main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rendering. Explicitly configure spring.jpa.open-in-view to disable this warning
2025-09-20T04:31:59.254Z INFO 1 --- [SpringBootProject] [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 2000 (http) with context path '/'
2025-09-20T04:31:59.284Z INFO 1 --- [SpringBootProject] [main] c.klef.dev.SpringBootProjectApplication : Started SpringBootProjectApplication in 9.456 seconds (process running for 10.413)
Backend is Running ...
```

JSK (4 days ago) 🔎 Ln 26, Col 21 Spaces: 4 UTF-8 CRLF () Java 🌐 Go Live ⚙️ Prettier 📁

30°C Sunny

**Vite + React**

Add Student

Student updated successfully.

Get Student By ID

33528

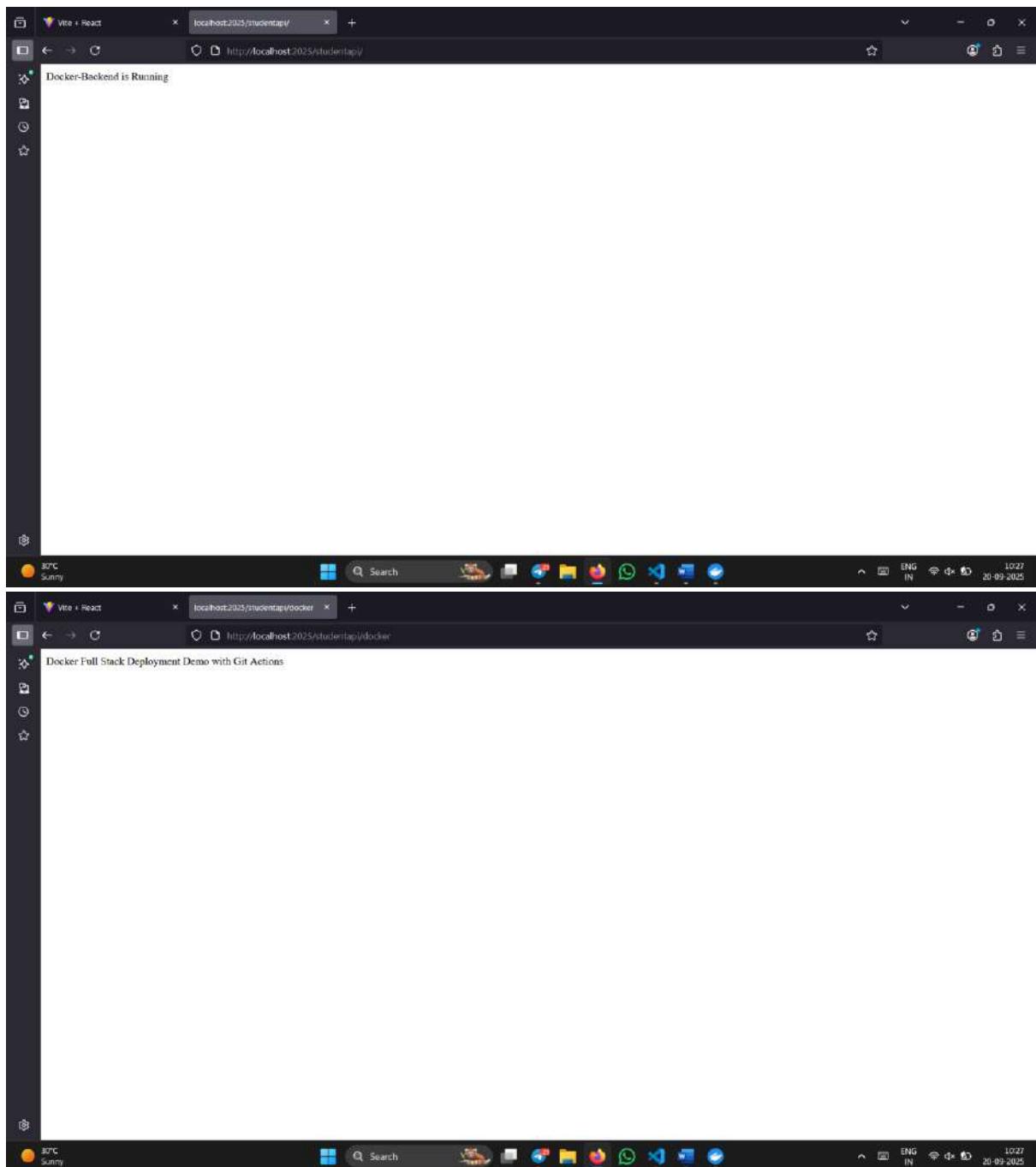
Fetch

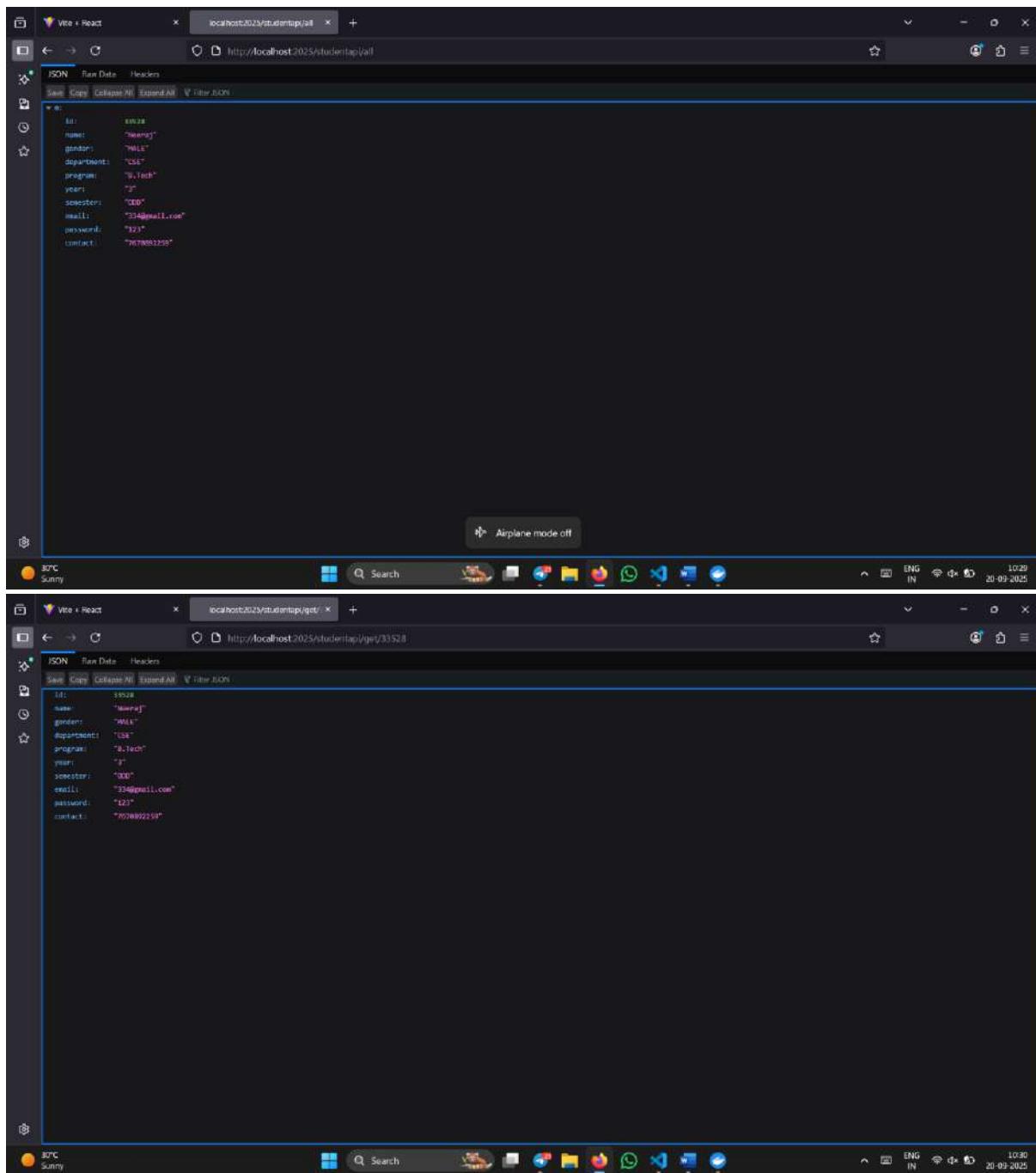
Student Found:

```
[{"id": 33528, "name": "Neeraj", "gender": "MALE", "department": "CSE", "program": "B.Tech", "year": "3", "semester": "ODD", "email": "334@gmail.com", "password": "123", "contact": "7670892259"}]
```

All Students

ID	Name	Gender	Department	Program	Year	Semester	Email	Password	Contact	Actions
33528	Neeraj	MALE	CSE	B.Tech	3	ODD	334@gmail.com	123	7670892259	<button>Edit</button> <button>Delete</button>





The screenshot shows two consecutive screenshots of a web browser displaying JSON data for a student record. Both screenshots have identical UI elements: a title bar with 'Vite + React' and 'localhost:3051/studentapi/v8', a URL bar with 'http://localhost:3051/studentapi/v8', a toolbar with 'JSON Raw Data Headers' and 'Save Copy Collapse All Expand All Filter JSON', and a status bar at the bottom showing '80°C Sunny' and system icons.

**Screenshot 1 (Top):**

HTTP Request: `http://localhost:3051/studentapi/v8/all`

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json; charset=UTF-8
Date: Mon, 20 Sep 2025 10:30:00 GMT
Content-Length: 214

[{"id": "33528", "name": "Mengist", "gender": "Male", "department": "CSE", "program": "B.Tech", "year": "3", "semester": "1000", "email": "334@gmail.com", "password": "123", "contact": "7678862259"}]
```

**Screenshot 2 (Bottom):**

HTTP Request: `http://localhost:3051/studentapi/v8/33528`

Response:

```
HTTP/1.1 200 OK
Content-Type: application/json; charset=UTF-8
Date: Mon, 20 Sep 2025 10:30:00 GMT
Content-Length: 214

{"id": "33528", "name": "Mengist", "gender": "Male", "department": "CSE", "program": "B.Tech", "year": "3", "semester": "1000", "email": "334@gmail.com", "password": "123", "contact": "7678862259"}
```

The screenshot shows a Java development environment with two identical windows side-by-side. Both windows have the title "GITACTIONS-DOCKER-FULLSTACK".

**Left Window:**

- Explorer:** Shows a project structure for "GITACTIONS-DOCKER-FULLSTACK" with branches for "STUDENTAPI-REACT", "STUDENTAPI-SPRINGBOOT", ".mvn", and "src". The "src" folder contains "main", "java", "com", "klef", "dev", "controller", "entity", "repository", "service", and "resources". A file named "StudentController.java" is selected in the controller folder.
- Terminal:** Displays a MySQL command-line interface running inside a Docker container. The session starts with a warning about using a password on the command line, followed by a welcome message for MySQL version 8.4.6. It shows the MySQL prompt "mysql>".
- Bottom Status Bar:** Shows the path "PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACTIONS-DOCKER-FULLSTACK", the command "docker exec -it mysql-db mysql", and icons for "powershell" and "docker".

**Right Window:**

- Explorer:** Same project structure as the left window.
- Terminal:** Displays a MySQL command-line interface running inside a Docker container. The session starts with a warning about using a password on the command line, followed by a welcome message for MySQL version 8.4.6. It shows the MySQL prompt "mysql>".
- Bottom Status Bar:** Shows the path "PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACTIONS-DOCKER-FULLSTACK", the command "docker exec -it mysql-db mysql", and icons for "powershell" and "docker".

The screenshot shows a Java IDE interface with a terminal window displaying MySQL queries. The terminal output is as follows:

```
PS D:\3-1 CI CD DEVEOPS\DOCKER\GITACTIONS-DOCKER-FULLSTACK> docker exec -it mysql-db mysql -uroot -pdocker
mysql> show tables;
+-----+
| Tables_in_klustudentdb |
+-----+
| student_table |
+-----+
1 row in set (0.01 sec)

mysql> select * from student_table;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| student_id | student_contact | student_department | student_email | student_gender | student_name | student_password | student_program | student_semester | student_year |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 33528 | 7670892259 | CSE | 334@gmail.com | MALE | Neeraj | B.Tech | ODD | 3 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

docker-compose up -d

docker-compose down -v

docker logs -f containernname