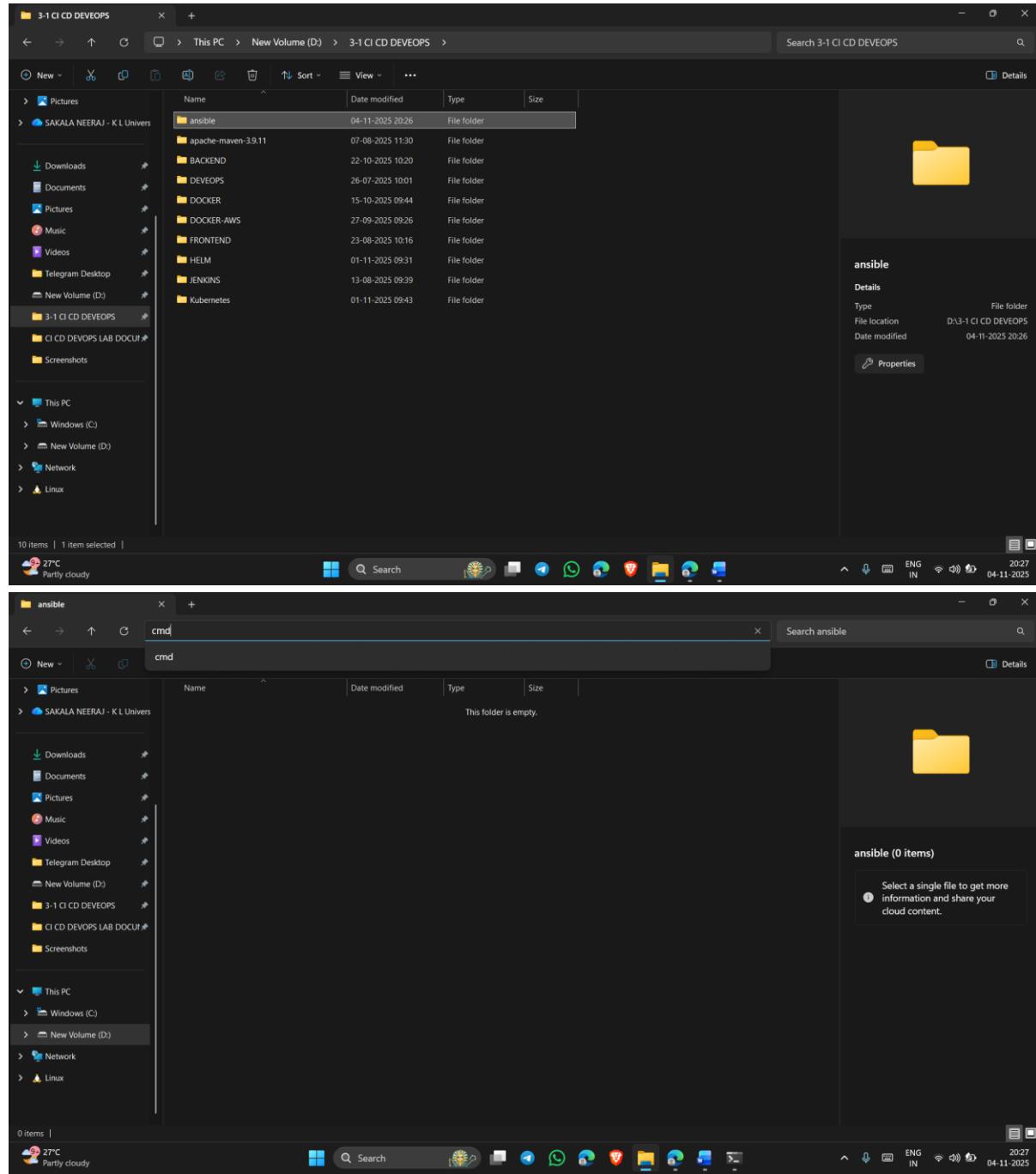


# LAB 15 Ansible





```
C:\Windows\System32\cmd.e > + - Microsoft Windows [version 10.0.26200.6899]
(c) Microsoft Corporation. All rights reserved.

D:\3-1 CI CD DEVEOPS\ansible>git clone https://github.com/suryakiran1993/Devops-Ansible
Cloning into 'Devops-Ansible'...
remote: Enumerating objects: 118, done.
remote: Counting objects: 100% (118/118), done.
remote: Compressing objects: 100% (88/88), done.
remote: Total 118 (delta 13), reused 64 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (118/118), 63.49 KiB | 68.00 KiB/s, done.
Resolving deltas: 100% (13/13), done.

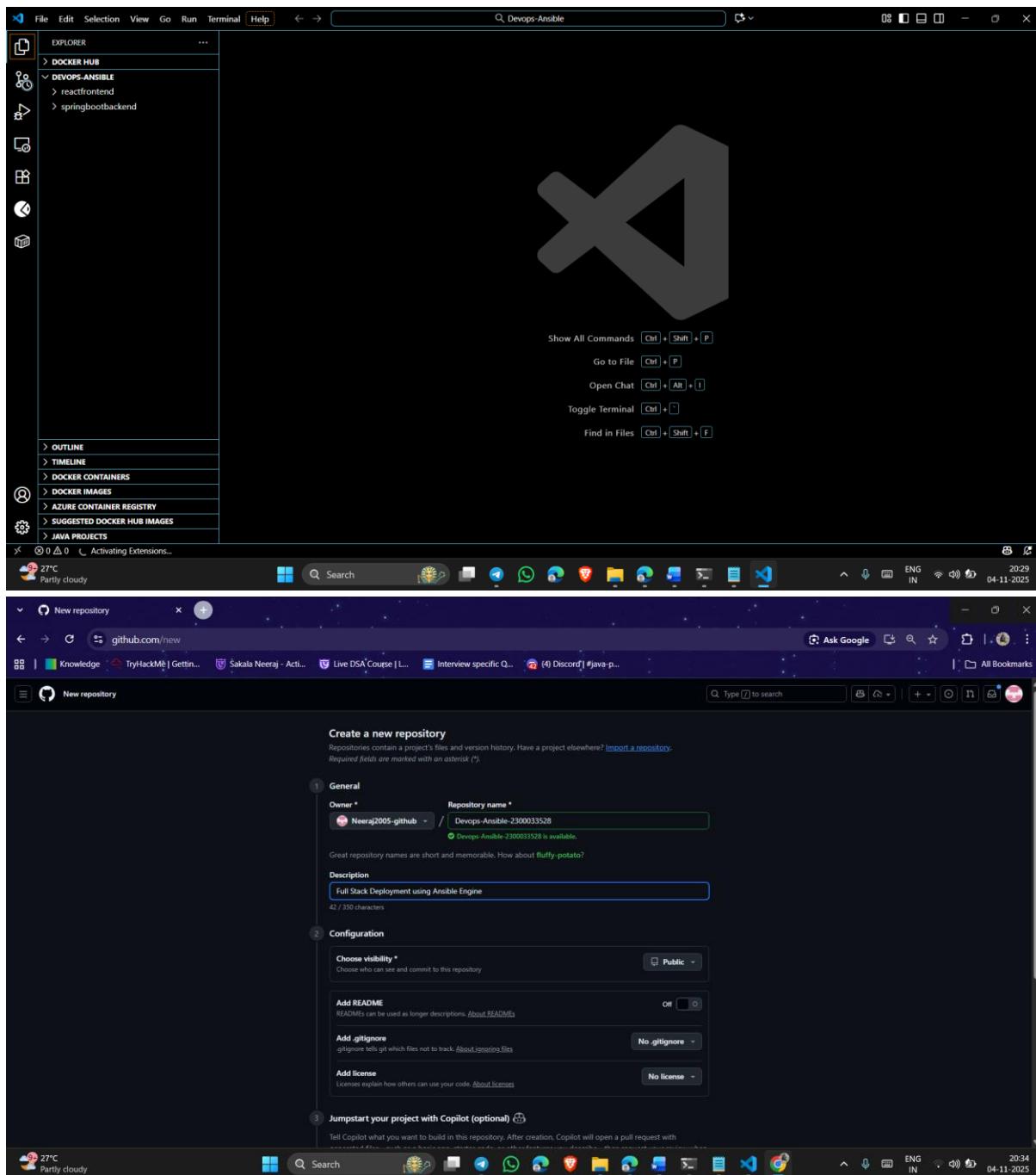
D:\3-1 CI CD DEVEOPS\ansible>
```


```
C:\Windows\System32\cmd.e > + - Microsoft Windows [version 10.0.26200.6899]
(c) Microsoft Corporation. All rights reserved.

D:\3-1 CI CD DEVEOPS\ansible>git clone https://github.com/suryakiran1993/Devops-Ansible
Cloning into 'Devops-Ansible'...
remote: Enumerating objects: 118, done.
remote: Counting objects: 100% (118/118), done.
remote: Compressing objects: 100% (88/88), done.
remote: Total 118 (delta 13), reused 64 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (118/118), 63.49 KiB | 68.00 KiB/s, done.
Resolving deltas: 100% (13/13), done.

D:\3-1 CI CD DEVEOPS\ansible>cd Devops-Ansible
D:\3-1 CI CD DEVEOPS\ansible\Devops-Ansible>code .
```



The image shows two screenshots of a computer screen displaying the GitHub interface.

**Screenshot 1: GitHub Repository Creation**

This screenshot shows the "New repository" configuration page on GitHub. The "Choose visibility" dropdown is set to "Public". Other options include "Add README" (disabled), "Add .gitignore" (disabled), and "Add license" (disabled). A section titled "Jumpstart your project with Copilot (optional)" is present, with a note about Copilot's role in generating files like basic app code. A "Prompt" input field is available for describing what Copilot should build. A green "Creating repository..." button is at the bottom right.

**Screenshot 2: GitHub Repository Details**

This screenshot shows the details page for a repository named "Neeraj2005-github/Devops-Ansible-2300033528". The repository is public. The main content area includes sections for "Start coding with Codespaces", "Add collaborators to this repository", and "Quick setup — if you've done this kind of thing before". It provides instructions for setting up the repository via desktop or command line, including sample commands for initializing a new repository or adding an existing one. The repository has 0 stars and 0 forks. The status bar at the bottom indicates it's 20:34 on 04-11-2025, with a weather icon showing 27°C and Partly cloudy.

The screenshot shows a Windows desktop environment with two main windows open:

- VS Code Terminal:** The terminal window displays a series of git commands being run in a directory named "Devops-Ansible". The commands include removing the origin, adding a new origin to GitHub, creating a branch named "main", and pushing the local "main" branch up to the remote "origin/main" branch. The output shows the progress of the push operation, including object counting, compression, and the final push.
- GitHub Repository Page:** A browser window is displaying the GitHub repository "Neeraj2005-github/Devops-Ansible-2300033528". The repository page includes sections for "About", "Code", "Branches", "Tags", "Commits", "README", "Add a README", "Languages", and "Suggested workflows".

The taskbar at the bottom of the screen shows various pinned icons and the system tray indicating the date and time (04-11-2025) and weather (27°C Partly cloudy).

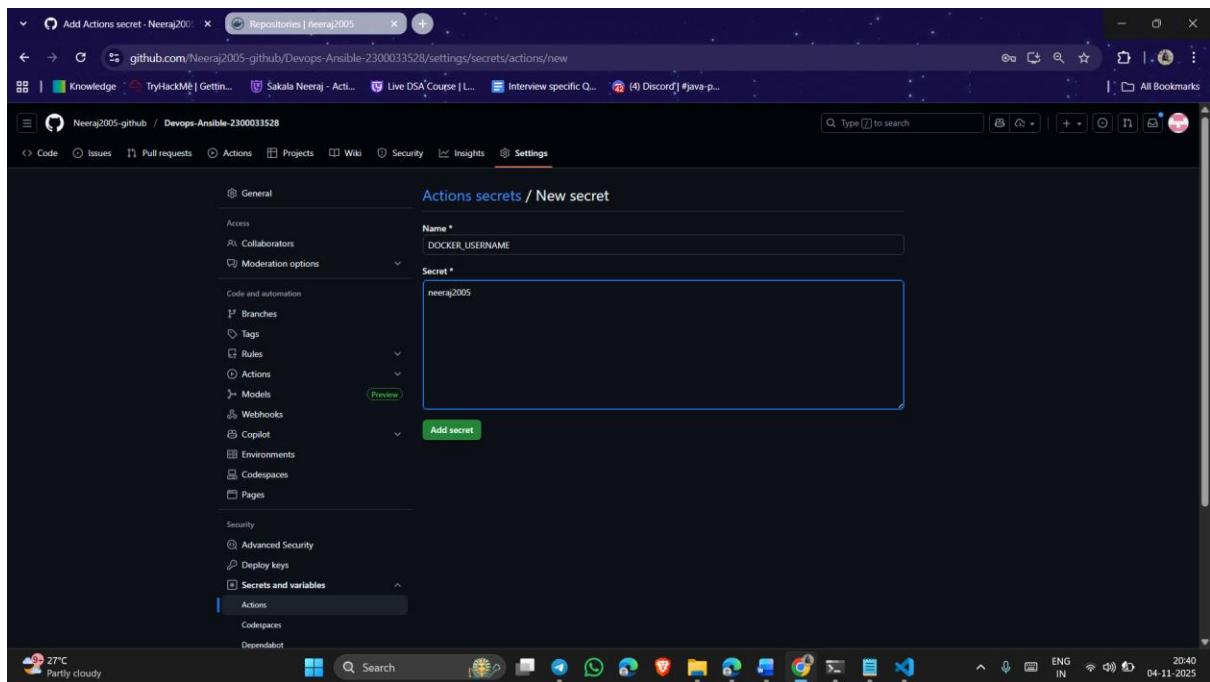
```
PS D:\3-1 CI CD DEVEOPS\ansible\Devops-Ansible> git remote remove origin
PS D:\3-1 CI CD DEVEOPS\ansible\Devops-Ansible> git remote add origin https://github.com/Neeraj2005-github/Devops-Ansible-2300033528.git
PS D:\3-1 CI CD DEVEOPS\ansible\Devops-Ansible> git branch
* main
PS D:\3-1 CI CD DEVEOPS\ansible\Devops-Ansible> git add .
PS D:\3-1 CI CD DEVEOPS\ansible\Devops-Ansible> git commit -m "project updated"
On branch main
nothing to commit, working tree clean
PS D:\3-1 CI CD DEVEOPS\ansible\Devops-Ansible> git push -u origin main
Enumerating objects: 118, done.
Counting objects: 100% (118/118), done.
Delta compression using up to 12 threads
Compressing objects: 100% (75/75), done.
Writing objects: 100% (118/118), 63.49 KiB | 5.29 MiB/s, done.
Total 118 (delta 13), reused 118 (delta 13), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (13/13), done.
To https://github.com/Neeraj2005-github/Devops-Ansible-2300033528.git
 * [new branch]      main    -> main
branch 'main' set up to track 'origin/main'.
PS D:\3-1 CI CD DEVEOPS\ansible\Devops-Ansible>
```

The screenshot shows three stacked screenshots of a GitHub repository's settings page, specifically for the repository `Neeraj2005-github/Devops-Ansible-2300033528`.

**Top Screenshot:** The first section shows the "Actions" tab under the "Code and automation" heading. It includes options like "Require contributors to sign off on web-based commits" and "Default branch".

**Middle Screenshot:** The second section shows the "Secrets and variables" tab under the "Security" heading. It includes sections for "Wikis" and "Features".

**Bottom Screenshot:** The third section shows the "Actions secrets and variables" tab under the "Actions" heading. It includes sections for "Actions secrets and variables" (with tabs for "Secrets" and "Variables") and "Repository secrets".



The screenshot shows the Docker Personal access tokens page. The left sidebar includes options like Home, Hub, Build Cloud, Hardened Images, Scout, Testcontainers Cloud, Docker Desktop, Settings, Account information, Email, Password, and 2FA. The main content area is titled "Personal access tokens" and displays a table of existing tokens:

Description	Scope	Status	Source	Created	Last used
Doctor Kubernetes git acti...	Read, Write, Delete	Active	Manual	Nov 04, 2025 at 10:34:58	Nov 04, 2025
Generated through desktop...	Read, Write, Delete	Active	Auto-generated	Oct 30, 2025 at 11:24:01	Oct 30, 2025
Generated through desktop...	Read, Write, Delete	Active	Auto-generated	Oct 08, 2025 at 20:56:32	Oct 30, 2025 at 11:23:00
Task Manager	Read, Write, Delete	Active	Manual	Oct 17, 2025 at 21:59:01	Oct 17, 2025 at 23:18:29
Docker AWS	Read, Write, Delete	Active	Manual	Oct 15, 2025 at 10:28:34	Oct 15, 2025 at 11:01:22
Practice	Read, Write, Delete	Active	Manual	Oct 15, 2025 at 07:18:36	Oct 15, 2025 at 07:53:53

On the right side, there's a sidebar with "neeraj2005" and links for "What's new", "My profile", "Account settings" (which is selected), "Billing", and "Sign out". A cookie consent banner at the bottom asks for permission to store cookies.

The second screenshot shows the "Create access token" page. The left sidebar is identical. The main content area is titled "Create access token" and contains fields for "Access token description" (set to "Ansible demo"), "Expiration date" (set to "None"), and "Optional Access permissions" (set to "Read, Write, Delete"). Below these fields is a note: "Read, Write, Delete tokens allow you to manage your repositories." At the bottom are "Cancel" and "Generate" buttons, and a cookie consent banner at the bottom.

System tray icons include weather (27°C Partly cloudy), search, file explorer, task manager, and other system icons. The date and time are shown as 04-11-2025 20:41.

The screenshot shows the Docker Personal access tokens page. A personal access token named "Ansible demo" has been generated. The token details are as follows:

- Access token description:** Ansible demo
- Expires on:** Never
- Access permissions:** Read, Write, Delete

Instructions for using the token with the Docker CLI are provided:

- Run: `$ docker login -u neeraj2005` (Copy button)
- At the password prompt, enter the personal access token: `dckr_pat_7CBHxxBPdARYNEK1j_uHkcmuT24` (Copy button)

A "Back to access tokens" button is at the bottom.

The screenshot shows the GitHub Actions secrets creation page. A new secret named "DOCKER\_SECRET" is being added. The secret value is "dckr\_pat\_7CBHxxBPdARYNEK1j\_uHkcmuT24". The "Add secret" button is visible at the bottom right of the secret input field.

The image shows two screenshots of the GitHub interface. The top screenshot displays the 'Actions secrets' page for a repository, showing two environment secrets: DOCKER\_SECRET (last updated now) and DOCKER\_USERNAME (last updated 1 minute ago). The bottom screenshot shows the 'Get started with GitHub Actions' page, featuring a grid of workflow templates for Docker, Node.js, and Java projects.

name: CI Build and Push Docker Images

on:

push:

branches:

- main

jobs:

build-and-push:

runs-on: ubuntu-latest

steps:

# Step 1 — Checkout code

- name: Checkout Repository

uses: actions/checkout@v4

# Step 2 — Set up Docker Buildx

- name: Set up Docker Buildx

uses: docker/setup-buildx-action@v3

# Step 3 — Login to DockerHub

- name: Login to DockerHub

uses: docker/login-action@v3

with:

username: \${{ secrets.DOCKER\_USERNAME }}

password: \${{ secrets.DOCKER\_SECRET }}

# Step 4 — Build & Push Backend Image

```
- name: Build and Push Backend Image
  uses: docker/build-push-action@v6
  with:
    context: ./springbootbackend
    file: ./springbootbackend/backend.Dockerfile
    push: true
    tags: ${{ secrets.DOCKER_USERNAME }}/ansible-
  backend:latest
```

```
# Step 5 — Build & Push Frontend Image
- name: Build and Push Frontend Image
  uses: docker/build-push-action@v6
  with:
    context: ./reactfrontend
    file: ./reactfrontend/frontend.Dockerfile
    push: true
    tags: ${{ secrets.DOCKER_USERNAME }}/ansible-
  frontend:latest
```

```
name: CI Build and Push Docker Images
on:
  push:
    branches:
      - main
jobs:
  build-and-push:
    runs-on: ubuntu-latest
    steps:
      # Step 1 - Checkout code
      - name: Checkout Repository
        uses: actions/checkout@v4
      # Step 2 - Set up Docker Buildx
      - name: Set up Docker Buildx
        uses: docker//setup-buildx-action@v3
      # Step 3 - Login to DockerHub
      - name: Login to DockerHub
        uses: docker/login-action@v3
        with:
          username: ${{ secrets.DOCKER_USERNAME }}
          password: ${{ secrets.DOCKER_SECRET }}
      # Step 4 - Build & Push Backend Image
      - name: Build and Push Backend Image
        uses: docker/build-push-action@v3
```

Marketplace Documentation

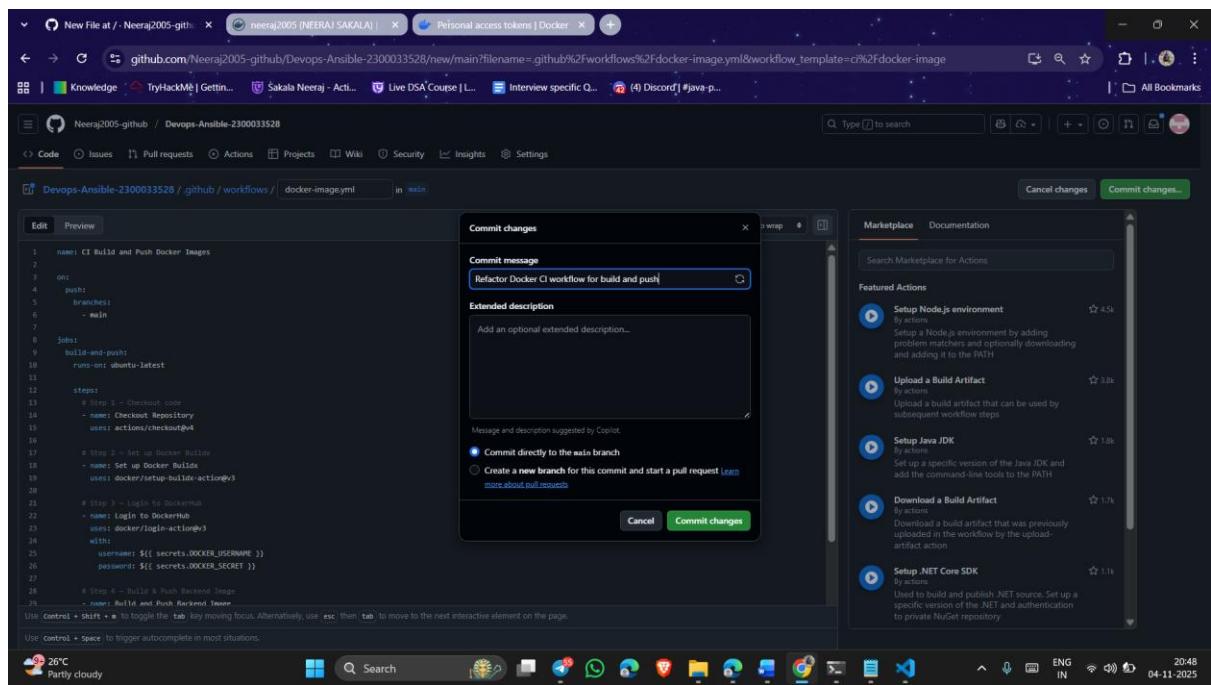
Search Marketplace for Actions

Featured Actions

- Setup Node.js environment
- Upload a Build Artifact
- Setup Java JDK
- Download a Build Artifact
- Setup .NET Core SDK

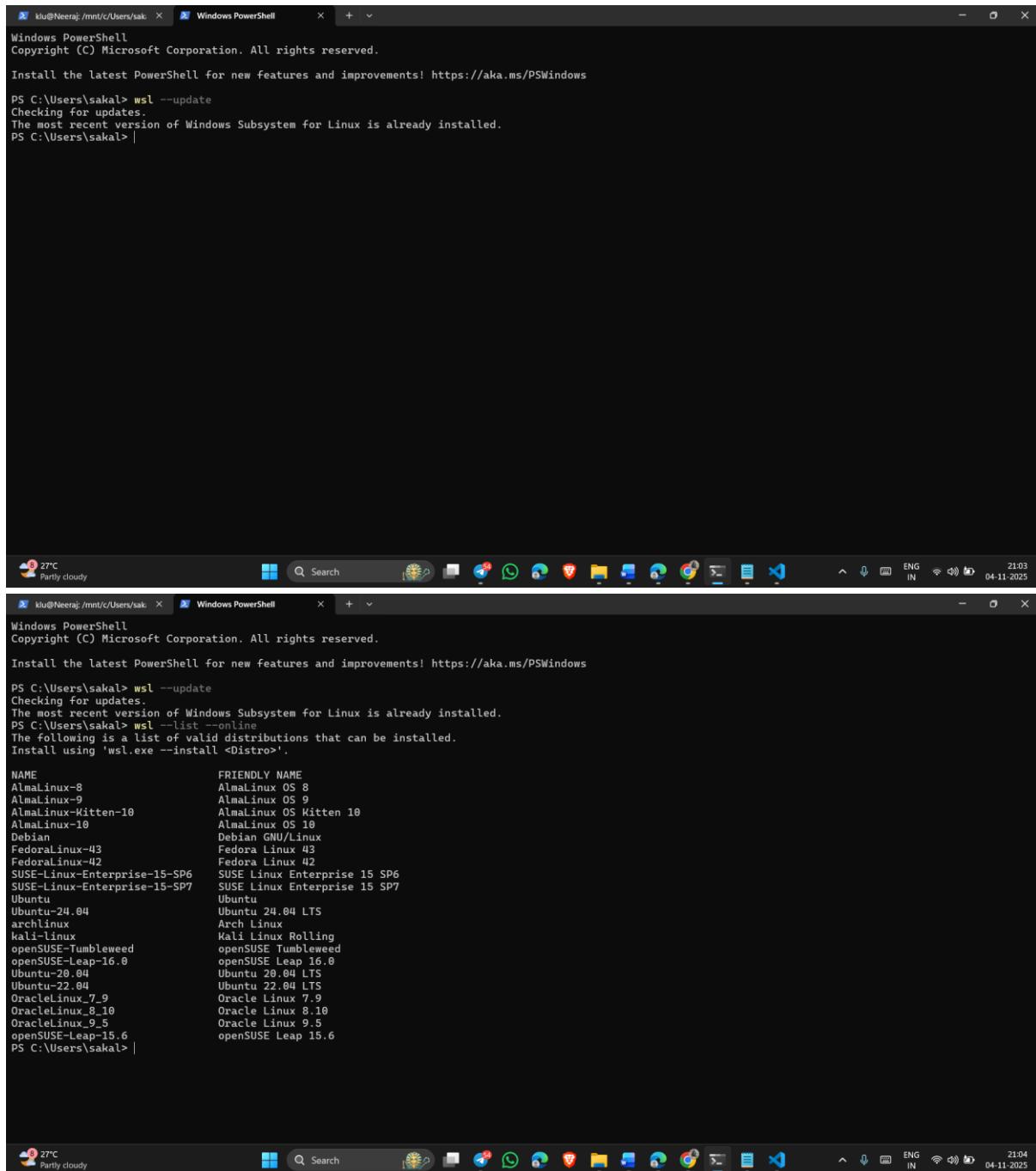
Cancel changes Commit changes...

26°C Partly cloudy



The screenshot shows a web browser window with three tabs open. The active tab is 'Workflow runs - Neeraj2005-g...' on GitHub. The URL is [github.com/Neeraj2005/github/Devops-Ansible-2300033528/actions](https://github.com/Neeraj2005/github/Devops-Ansible-2300033528/actions). The page displays a list of workflow runs for the repository 'Devops-Ansible-2300033528'. One run is visible: 'Refactor Docker CI workflow for build and push' (CI Build and Push Docker Images #1), triggered by a commit, pushed by 'neeraj2005-github', and completed 4 minutes ago with a duration of 2m 53s. The sidebar on the left shows navigation links for 'Actions', 'All workflows', 'Management' (Caches, Annotations, Runners, Usage metrics, Performance metrics), and 'Code', 'Issues', 'Pull requests', 'Projects', 'Wiki', 'Security', 'Insights', and 'Settings'. The system tray at the bottom indicates it's 26°C, Partly cloudy, and the date is 04-11-2025.

The screenshot shows a web browser window with three tabs open. The active tab is 'hub.docker.com/repositories/neeraj2005?search=ansible'. The URL is [hub.docker.com/repositories/neeraj2005?search=ansible](https://hub.docker.com/repositories/neeraj2005?search=ansible). The page displays a list of repositories under the namespace 'neeraj2005'. A search bar shows 'ansible'. Two repositories are listed: 'neeraj2005/ansible-frontend' and 'neeraj2005/ansible-backend', both pushed 1 minute ago. The sidebar on the left shows navigation links for 'Docker Personal', 'Repositories', 'Hardened Images', 'Collaborations', 'Settings', 'Default privacy', 'Notifications', 'Billing', 'Usage', 'Pulls', and 'Storage'. A modal at the bottom asks for cookie acceptance with options 'Cookies Settings', 'Reject All', and 'Accept All Cookies'. The system tray at the bottom indicates it's 26°C, Partly cloudy, and the date is 04-11-2025.



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

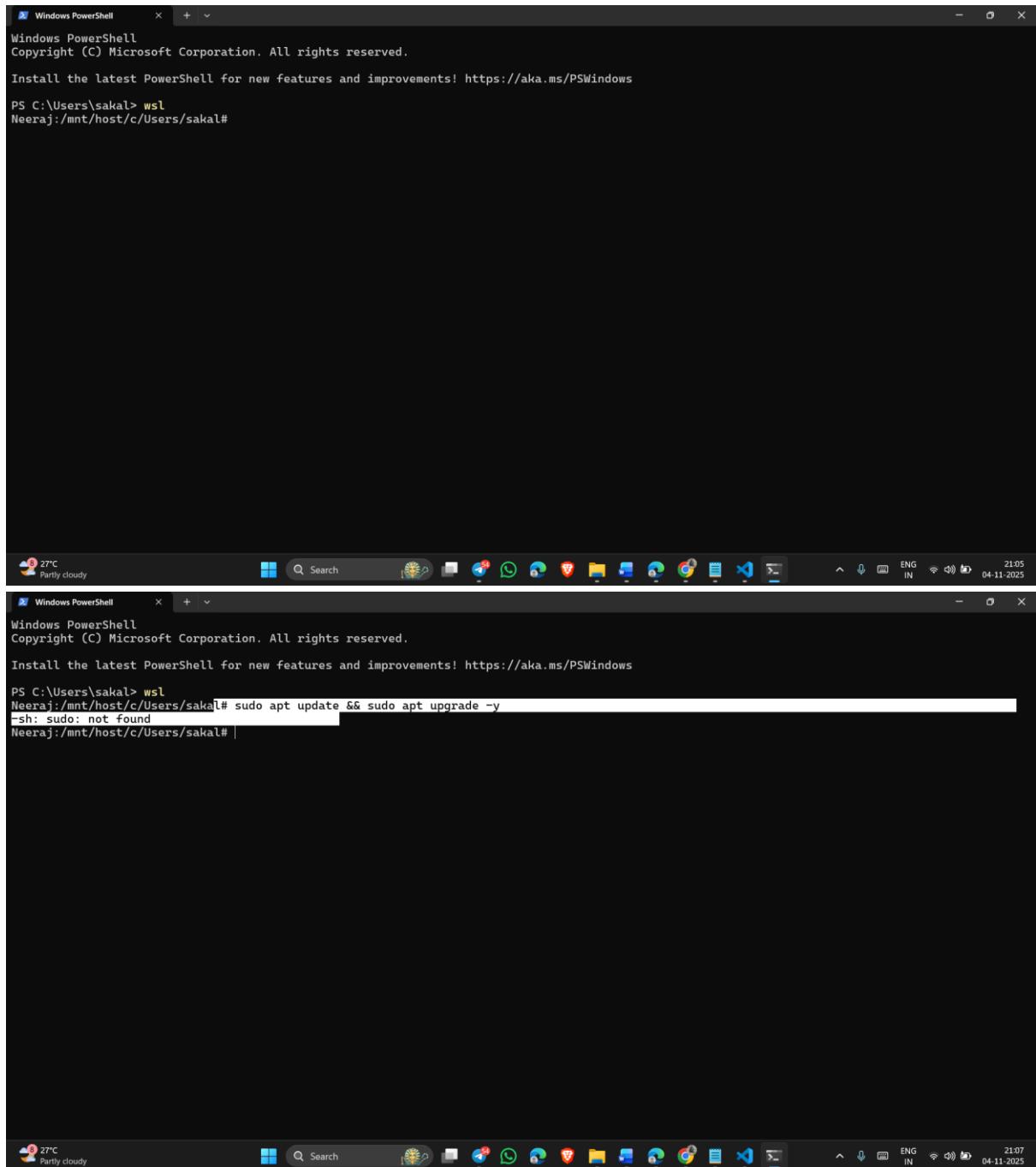
PS C:\Users\sakal> wsl --update
Checking for updates.
The most recent version of Windows Subsystem for Linux is already installed.

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

PS C:\Users\sakal> wsl --list --online
The following is a list of valid distributions that can be installed.
Install using 'wsl.exe --install <Distro>'.

NAME                      FRIENDLY NAME
Almalinux-8                Almalinux OS 8
Almalinux-9                Almalinux OS 9
Almalinux-Kitten-10        Almalinux OS Kitten 10
Almalinux-10                Almalinux OS 10
Debian                     Debian GNU/Linux
FedoraLinux-43              Fedora Linux 43
FedoraLinux-42              Fedora Linux 42
SUSE-Linux-Enterprise-15-SP6 SUSE Linux Enterprise 15 SP6
SUSE-Linux-Enterprise-15-SP7 SUSE Linux Enterprise 15 SP7
Ubuntu                      Ubuntu
Ubuntu-24.04                Ubuntu 24.04 LTS
archlinux                   Arch Linux
kali-linux                  Kali Linux Rolling
openSUSE-Tumbleweed         openSUSE Tumbleweed
openSUSE-Leap-16.0           openSUSE Leap 16.0
Ubuntu-20.04                Ubuntu 20.04 LTS
Ubuntu-22.04                Ubuntu 22.04 LTS
OracleLinux-7.9              Oracle Linux 7.9
OracleLinux-8.10             Oracle Linux 8.10
OracleLinux-9.5              Oracle Linux 9.5
openSUSE-Leap-15.6           openSUSE Leap 15.6
```



```
Windows PowerShell
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PS C:\Users\sakal> wsl
Neeraj:/mnt/host/c/Users/sakal#
```

```
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\sakal> wsl
Neeraj:/mnt/host/c/Users/sakal# sudo apt update && sudo apt upgrade -y
-sh: sudo: not found
Neeraj:/mnt/host/c/Users/sakal# |
```

```
klu@Neeraj:/mnt/c/Users/sal > + ->
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\sakal> wsl -d Ubuntu
klu@Neeraj:/mnt/c/Users/sakal$ sudo apt update && sudo apt upgrade -y
[sudo] password for klu:
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease [126 kB]
Get:2 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:5 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [1298 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [213 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [9012 B]
Get:10 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [986 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [283 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.2 kB]
Get:13 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [19.4 kB]
Get:14 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [2131 kB]
Get:15 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [483 kB]
Get:16 http://archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:17 http://archive.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 kB]
Get:18 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 c-n-f Metadata [500 kB]
Get:19 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [27.4 kB]
Get:20 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [5788 B]
Get:21 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 kB]
Get:22 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [384 kB]
Get:23 http://archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:24 http://archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [381 kB]
Get:25 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
79% [25 Packages 9897 B/269 kB 4%]
```

1219 kB/s 6s

```
klu@Neeraj:/mnt/c/Users/sal > + ->
27°C Partly cloudy
Search ENG IN 21:11 04-11-2025
klu@Neeraj:/mnt/c/Users/sakal > + ->
Unpacking libpython3.12t64:amd64 (3.12.3-1ubuntu0.8) over (3.12.3-1ubuntu0.7) ...
Preparing to unpack .../01-python3.12_3.12.3-1ubuntu0.8_amd64.deb ...
Unpacking python3.12 (3.12.3-1ubuntu0.8) over (3.12.3-1ubuntu0.7) ...
Preparing to unpack .../02-libpython3.12-stldib_3.12.3-1ubuntu0.8_amd64.deb ...
Unpacking libpython3.12-stldib:amd64 (3.12.3-1ubuntu0.8) over (3.12.3-1ubuntu0.7) ...
Preparing to unpack .../03-python3.12-minimal_3.12.3-1ubuntu0.8_amd64.deb ...
Unpacking python3.12-minimal (3.12.3-1ubuntu0.8) over (3.12.3-1ubuntu0.7) ...
Preparing to unpack .../04-libpython3.12-minimal_3.12.3-1ubuntu0.8_amd64.deb ...
Unpacking libpython3.12-minimal:amd64 (3.12.3-1ubuntu0.8) over (3.12.3-1ubuntu0.7) ...
Preparing to unpack .../05-libsqlite3-0_3.45.1-1ubuntu2.5_amd64.deb ...
Unpacking libsqlite3-0:amd64 (3.45.1-1ubuntu2.5) over (3.45.1-1ubuntu2.4) ...
Preparing to unpack .../06-distro-info-data_0.66ubuntu0.5_all.deb ...
Unpacking distro-info-data (0.66ubuntu0.5) over (0.66ubuntu0.3) ...
Preparing to unpack .../07-libxml2_2.9.14+dfsg-1.3ubuntu3.6_amd64.deb ...
Unpacking libxml2:amd64 (2.9.14+dfsg-1.3ubuntu3.6) over (2.9.14+dfsg-1.3ubuntu3.3) ...
Preparing to unpack .../08-locales_2.39-9ubuntu8.6_all.deb ...
Unpacking locales (2.39-9ubuntu8.6) over (2.39-9ubuntu8.5) ...
Preparing to unpack .../09-openssl_3.0.13-9ubuntu3.6_amd64.deb ...
Unpacking openssl (3.0.13-9ubuntu3.6) over (3.0.13-9ubuntu3.5) ...
Preparing to unpack .../10-systemd-hwe-hwdb_255.1.6_all.deb ...
Unpacking systemd-hwe-hwdb (255.1.6) over (255.1.4) ...
Preparing to unpack .../11-vim_23a9.1.0016-1ubuntu7.9_amd64.deb ...
Unpacking vim (2:9.1.0016-1ubuntu7.9) over (2:9.1.0016-1ubuntu7.8) ...
Preparing to unpack .../12-vim-common_23a9.1.0016-1ubuntu7.9_all.deb ...
Unpacking vim-common (2:9.1.0016-1ubuntu7.9) over (2:9.1.0016-1ubuntu7.8) ...
Preparing to unpack .../13-vim-tiny_23a9.1.0016-1ubuntu7.9_amd64.deb ...
Unpacking vim-tiny (2:9.1.0016-1ubuntu7.9) over (2:9.1.0016-1ubuntu7.8) ...
Preparing to unpack .../14-vim-runtime_23a9.1.0016-1ubuntu7.9_all.deb ...
Unpacking vim-runtime (2:9.1.0016-1ubuntu7.9) over (2:9.1.0016-1ubuntu7.8) ...
Preparing to unpack .../15-xterm_23a9.1.0016-1ubuntu7.9_amd64.deb ...
Unpacking xterm (2:9.1.0016-1ubuntu7.9) over (2:9.1.0016-1ubuntu7.8) ...
Preparing to unpack .../16-openssh-client_13a9.6p1-3ubuntu13.14_amd64.deb ...
Unpacking openssh-client (13a9.6p1-3ubuntu13.14) over (13a9.6p1-3ubuntu13.13) ...
Preparing to unpack .../17-libgprofng_0.2.42-4ubuntu2.6_amd64.deb ...
Unpacking libgprofng:amd64 (0.2.42-4ubuntu2.6) over (0.2.42-4ubuntu2.5) ...
Preparing to unpack .../18-libctf0_0.2.42-4ubuntu2.6_amd64.deb ...
Unpacking libctf0:amd64 (0.2.42-4ubuntu2.6) over (0.2.42-4ubuntu2.5) ...
Preparing to unpack .../19-libctf-nobfd0_0.2.42-4ubuntu2.6_amd64.deb ...
Unpacking libctf-nobfd0:amd64 (0.2.42-4ubuntu2.6) over (0.2.42-4ubuntu2.5) ...

Progress: [ 40%] [#####.....]
```

Gold -1.18% 21:15 04-11-2025

```

klu@Neeraj:/mnt/c/Users/sal ~ + ~
Setting up openssl (3.0.13~ubuntu3.6) ...
Setting up libcurl2t64:amd64 (2.4.-1.2ubuntu7.4) ...
Setting up libxml2:amd64 (2.9.14+dfsg-1.3ubuntu3.6) ...
Setting up systemd-resolved (255.4-ubuntu8.11) ...
Setting up libctf0:amd64 (2.42-4ubuntu2.6) ...
Setting up python3.12-minimal (3.12.3-1ubuntu0.8) ...
Setting up snapd (2.71+ubuntu24.04) ...
Installing new version of config file /etc/apparmor.d/usr.lib.snapd.snap-confine.real ...
snapd.failure.service is a disabled or a static unit not running, not starting it.
snapd.gpio-chardev-setup.target is a disabled or a static unit not running, not starting it.
snapd.snap-repair.service is a disabled or a static unit not running, not starting it.
Setting up libpython3.12-stdlib:amd64 (3.12.3-1ubuntu0.8) ...
Setting up python3.12 (3.12.3-1ubuntu0.8) ...
Setting up dconf-service (0.40.0-4ubuntu0.1) ...
Setting up vim-tiny (2.9.1.0016-1ubuntu7.9) ...
Setting up software-properties-common (0.99.49.3) ...
Setting up libpython3.12t64:amd64 (3.12.3-1ubuntu0.8) ...
Setting up libgprofng0:amd64 (2.42-4ubuntu2.6) ...
Setting up libllyvm28:amd64 (1:20.1.2-0ubuntu1-24.04.2) ...
Setting up binutils-x86-64-linux-gnu (2.42-4ubuntu2.6) ...
Setting up mesa-vulkan-drivers:amd64 (25.0.7-0ubuntu0.24.04.2) ...
Setting up mesa-libgbm1:amd64 (25.0.7-0ubuntu0.24.04.2) ...
Setting up vim (2:9.1.0016-1ubuntu7.9) ...
Setting up dconf-gsettings-backend:amd64 (0.48.0-4ubuntu0.1) ...
Setting up libgbm1:amd64 (25.0.7-0ubuntu0.24.04.2) ...
Setting up libgl1-mesa-dri:amd64 (25.0.7-0ubuntu0.24.04.2) ...
Setting up binutils (2.42-4ubuntu2.6) ...
Setting up libegl-mesa0:amd64 (25.0.7-0ubuntu0.24.04.2) ...
Setting up libglx-mesa0:amd64 (25.0.7-0ubuntu0.24.04.2) ...
Processing triggers for rsyslog (8.2312.0-3ubuntu0.1) ...
Processing triggers for systemd (255.4-1ubuntu8.11) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libglib2.0-0ubuntu4:amd64 (2.40.0-6ubuntu3.4) ...
Processing triggers for dbus (1.14.10-4ubuntu4.1) ...
Processing triggers for install-info (7.1-3build2) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
klu@Neeraj:/mnt/c/Users/sakal$ sudo apt install -y python3 python3-pip python3-venv
python3 --version
pip3 --version

klu@Neeraj:/mnt/c/Users/sal ~ + ~
Preparing to unpack .../20-libhwasan0_14.2.0-4ubuntu2-24.04_amd64.deb ...
Unpacking libhwasan0:amd64 (14.2.0-4ubuntu2-24.04) ...
Selecting previously unselected package libquadmath0:amd64.
Preparing to unpack .../21-libquadmath0_14.2.0-4ubuntu2-24.04_amd64.deb ...
Unpacking libquadmath0:amd64 (14.2.0-4ubuntu2-24.04) ...
Selecting previously unselected package libgcc-13-dev:amd64.
Preparing to unpack .../22-libgcc-13-dev_13.3.0-6ubuntu2-24.04_amd64.deb ...
Unpacking libgcc-13-dev:amd64 (13.3.0-6ubuntu2-24.04) ...
Selecting previously unselected package gcc-13-x86-64-linux-gnu.
Preparing to unpack .../23-gcc-13-x86-64-linux-gnu_13.3.0-6ubuntu2-24.04_amd64.deb ...
Unpacking gcc-13-x86-64-linux-gnu (13.3.0-6ubuntu2-24.04) ...
Selecting previously unselected package gcc-13.
Preparing to unpack .../24-gcc-13.3.0-6ubuntu2-24.04_amd64.deb ...
Unpacking gcc-13 (13.3.0-6ubuntu2-24.04) ...
Selecting previously unselected package gcc-x86-64-linux-gnu.
Preparing to unpack .../25-gcc-x86-64-linux-gnu_493a13.2.0-7ubuntu1_amd64.deb ...
Unpacking gcc-x86-64-linux-gnu (493a13.2.0-7ubuntu1) ...
Selecting previously unselected package gcc.
Preparing to unpack .../26-gcc_493a13.2.0-7ubuntu1_amd64.deb ...
Unpacking gcc (493a13.2.0-7ubuntu1) ...
Selecting previously unselected package libstdc++-13-dev:amd64.
Preparing to unpack .../27-libstdc++-13-dev_13.3.0-6ubuntu2-24.04_amd64.deb ...
Unpacking libstdc++-13-dev:amd64 (13.3.0-6ubuntu2-24.04) ...
Selecting previously unselected package g++-13-x86-64-linux-gnu.
Preparing to unpack .../28-g++-13-x86-64-linux-gnu_13.3.0-6ubuntu2-24.04_amd64.deb ...
Unpacking g++-13-x86-64-linux-gnu (13.3.0-6ubuntu2-24.04) ...
Selecting previously unselected package g++-13.
Preparing to unpack .../29-g++-13_13.3.0-6ubuntu2-24.04_amd64.deb ...
Unpacking g++-13 (13.3.0-6ubuntu2-24.04) ...
Selecting previously unselected package g++-x86-64-linux-gnu.
Preparing to unpack .../30-g++-x86-64-linux-gnu_493a13.2.0-7ubuntu1_amd64.deb ...
Unpacking g++-x86-64-linux-gnu (493a13.2.0-7ubuntu1) ...
Selecting previously unselected package g++.
Preparing to unpack .../31-g++_493a13.2.0-7ubuntu1_amd64.deb ...
Unpacking g++ (493a13.2.0-7ubuntu1) ...
Selecting previously unselected package make.
Preparing to unpack .../32-make_4.3-4.1build2_amd64.deb ...
Unpacking make (4.3-4.1build2) ...
Selecting previously unselected package libdpkg-perl.

Progress: [ 23% ] [=====.....]
klu@Neeraj:/mnt/c/Users/sakal ~ + ~
21:17 04-11-2025

```

```
ku@Neeraj:/mnt/c/Users/sal ~ + ~
Setting up libitm1:amd64 (14.2.0-4ubuntu2~24.04) ...
Setting up libjs-underscore (1:13.4~dfsg+1.11.4-3) ...
Setting up liblalgorithmm-merge-perl (0.08-5) ...
Setting up python3.12-venv (3.12.3~1ubuntu0.8) ...
Setting up cpp-13-x86-64-linux-gnu (13.3.0-6ubuntu2~24.04) ...
Setting up dpkg-dev (1.22.6ubuntu6.5) ...
Setting up python3-venv (3.12.3~0ubuntu2) ...
Setting up libjs-sphinxdoc (7.2.6-6) ...
Setting up libgcc-13-dev:amd64 (13.3.0-6ubuntu2~24.04) ...
Setting up libc6-dev:amd64 (2.39-0ubuntu8.6) ...
Setting up libstdc++-13-dev:amd64 (13.3.0-6ubuntu2~24.04) ...
Setting up cpp-x86-64-linux-gnu (4:13.2.0-7ubuntu1) ...
Setting up cpp-13 (13.3.0-6ubuntu2~24.04) ...
Setting up gcc-13-x86-64-linux-gnu (13.3.0-6ubuntu2~24.04) ...
Setting up libexpat1-dev:amd64 (2.6.1-2ubuntu0.3) ...
Setting up gcc-13 (13.3.0-6ubuntu2~24.04) ...
Setting up g++-13 (13.3.0-6ubuntu2~24.04) ...
Setting up zlibc1g-dev:amd64 (1:1.3.dsfg-3.1ubuntu2.1) ...
Setting up cpp (4:13.2.0-7ubuntu1) ...
Setting up g++-13-x86-64-linux-gnu (13.3.0-6ubuntu2~24.04) ...
Setting up gcc-x86-64-linux-gnu (4:13.2.0-7ubuntu1) ...
Setting up libpython3-dev:amd64 (3.12.3~0ubuntu2) ...
Setting up python3-dev (3.12.3~0ubuntu2) ...
Setting up g++ (4:13.2.0-7ubuntu1) ...
Setting up python3.12-dev (3.12.3~1ubuntu0.8) ...
Setting up g++-x86-64-linux-gnu (4:13.2.0-7ubuntu1) ...
Setting up g++-13 (13.3.0-6ubuntu2~24.04) ...
Setting up libpython3-dev:amd64 (3.12.3~0ubuntu2) ...
Setting up python3-dev (3.12.3~0ubuntu2) ...
Setting up g++ (4:13.2.0-7ubuntu1) ...
update-alternatives: using /usr/bin/g++ to provide /usr/bin/c++ (c++) in auto mode
Setting up build-essential (12.18ubuntu1) ...
Setting up libelf1:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libgd3:amd64 (2.3.3-9ubuntu5) ...
Setting up libgc-devtools (2.39-0ubuntu8.6) ...
Setting up libelf-plugin-aomdec:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libelf-plugin-libde265:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libelf-plugin-aomen:amd64 (1.17.6-1ubuntu4.1) ...
Processing triggers for libc-bin (2.39-0ubuntu8.6) ...
Processing triggers for man-db (2.12.0-4build2) ...
Python 3.12.3
pip 24.0 from /usr/lib/python3/dist-packages/pip (python 3.12)
ku@Neeraj:/mnt/c/Users/sakal$ sudo apt install -y software-properties-common git curl apt-transport-https ca-certificates gnupg lsb-release
```

```
26°C Party cloudy Search ENG IN 21:18 04-11-2025
ku@Neeraj:/mnt/c/Users/sal ~ + ~
Setting up libelf-plugin-aomdec:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libelf-plugin-libde265:amd64 (1.17.6-1ubuntu4.1) ...
Setting up libelf-plugin-aomen:amd64 (1.17.6-1ubuntu4.1) ...
Processing triggers for libc-bin (2.39-0ubuntu8.6) ...
Processing triggers for man-db (2.12.0-4build2) ...
Python 3.12.3
pip 24.0 from /usr/lib/python3/dist-packages/pip (python 3.12)
ku@Neeraj:/mnt/c/Users/sakal$ sudo apt install -y software-properties-common git curl apt-transport-https ca-certificates gnupg lsb-release
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
software-properties-common is already the newest version (0.99.49.3).
software-properties-common set to manually installed.
git is already the newest version (1:2.43.0-1ubuntu7.3).
git set to manually installed.
curl is already the newest version (8.5.0-2ubuntu10.6).
curl set to manually installed.
ca-certificates is already the newest version (20240203).
ca-certificates set to manually installed.
gnupg is already the newest version (2.4.4-2ubuntu17.3).
gnupg set to manually installed.
lsb-release is already the newest version (12.0-2).
lsb-release set to manually installed.
The following package was automatically installed and is no longer required:
 liblvm19
Use 'sudo apt autoremove' to remove it.
The following NEW packages will be installed:
 apt-transport-https
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 3970 B of archives.
After this operation, 36.9 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 apt-transport-https all 2.8.3 [3970 B]
Fetched 3970 B in 1s (5942 B/s)
Selecting previously unselected package apt-transport-https.
(Reading database ... 47786 files and directories currently installed.)
Preparing to unpack .../apt-transport-https_2.8.3_all.deb ...
Unpacking apt-transport-https (2.8.3) ...
Setting up apt-transport-https (2.8.3) ...
ku@Neeraj:/mnt/c/Users/sakal$
```

26°C Party cloudy Search ENG IN 21:18 04-11-2025

```
ku@Neeraj:/mnt/c/Users/sakal$ + 
The following package was automatically installed and is no longer required:
libllvm9
Use 'sudo apt autoremove' to remove it.
The following NEW packages will be installed:
apt-transport-https
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 3970 B of archives.
After this operation, 36.9 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 apt-transport-https all 2.8.3 [3970 B]
Fetched 3970 B in 1s (5942 B/s)
Selecting previously unselected package apt-transport-https.
(Reading database ... 47786 files and directories currently installed.)
Prepairing to unpack .../apt-transport-https_2.8.3_all.deb ...
Unpacking apt-transport-https (2.8.3) ...
Setting up apt-transport-https (2.8.3) ...
ku@Neeraj:/mnt/c/Users/sakal$ sudo add-apt-repository --yes --update ppa:ansible/ansible
Repository: 'Types: deb
URIs: https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/
Suites: noble
Components: main
'
Description:
Ansible is a radically simple IT automation platform that makes your applications and systems easier to deploy. Avoid writing scripts or custom code to deploy and update your applications - automate in a language that approaches plain English, using SSH, with no agents to install on remote systems.
http://ansible.com/
If you face any issues while installing Ansible PPA, file an issue here:
https://github.com/ansible-community/ppa/issues
More info: https://launchpad.net/~ansible/+archive/ubuntu/ansible
Adding repository.
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Get:5 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/noble InRelease [17.8 kB]
Get:6 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/noble/main amd64 Packages [776 B]
Get:7 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/noble/main Translation-en [472 B]
Fetched 19.1 kB in 2s (8004 B/s)
Reading package lists... Done
ku@Neeraj:/mnt/c/Users/sakal$ |
```

26°C Partly cloudy     Search     ENG IN 21:19 04-11-2025

```
ku@Neeraj:/mnt/c/Users/sakal$ + 
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Get:5 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/noble InRelease [17.8 kB]
Get:6 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/noble/main amd64 Packages [776 B]
Get:7 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/noble/main Translation-en [472 B]
Fetched 19.1 kB in 2s (8004 B/s)
Reading package lists... Done
ku@Neeraj:/mnt/c/Users/sakal$ sudo apt install -y ansible
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
libllvm9
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
ansible-core python3-jmespath python3-kerberos python3-nacl python3-ntlm-auth python3-packaging python3-paramiko python3-requests-ntlm
python3-resolve lib python3-winrm python3-xmldict sshpass
Suggested packages:
python-nacl-doc python3-gssapi python3-invoke
The following NEW packages will be installed:
ansible ansible-core python3-jmespath python3-kerberos python3-nacl python3-ntlm-auth python3-packaging python3-paramiko python3-requests-ntlm
python3-resolve lib python3-winrm python3-xmldict sshpass
0 upgraded, 13 newly installed, 0 to remove and 0 not upgraded.
Need to get 20.3 MB of archives.
After this operation, 224 MB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu noble/main amd64 python3-packaging all 24.0-1 [41.1 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble/universe amd64 python3-resolve lib all 1.0.1-1 [25.7 kB]
Get:3 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/noble/main amd64 ansible-core all 2.19.3-1ppa-noble [1133 kB]
Get:4 https://archive.ubuntu.com/ubuntu/noble/main amd64 python3-jmespath all 1.0.1-1 [21.3 kB]
Get:5 http://archive.ubuntu.com/ubuntu/noble/universe amd64 python3-kerberos amd64 1.1.14-3.1build9 [21.2 kB]
Get:6 http://archive.ubuntu.com/ubuntu/noble/main amd64 python3-nacl amd64 1.5.0-4build1 [57.9 kB]
Get:7 http://archive.ubuntu.com/ubuntu/noble/universe amd64 python3-ntlm-auth all 1.5.0-1 [21.3 kB]
Get:8 http://archive.ubuntu.com/ubuntu/noble-updates/main amd64 python3-paramiko all 2.12.0-2ubuntu4.1 [137 kB]
Get:9 http://archive.ubuntu.com/ubuntu/noble/universe amd64 python3-requests-ntlm all 1.1.0-3 [6308 B]
Get:10 http://archive.ubuntu.com/ubuntu/noble-updates/main amd64 python3-xmldict all 0.13.0-1ubuntu0.24.04.1 [14.3 kB]
Get:11 http://archive.ubuntu.com/ubuntu/noble/universe amd64 python3-winrm all 0.4.3-2 [31.9 kB]
Get:12 http://archive.ubuntu.com/ubuntu/noble/universe amd64 sshpass amd64 1.99-1 [11.7 kB]
Get:13 https://ppa.launchpadcontent.net/ansible/ansible/ubuntu/noble/main amd64 ansible all 12.1.0-1ppa-noble [18.7 MB]
27% [13 ansible 755 kB/18.7 MB 4%] |
```

120 kB/s 2min 29s

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```
klu@Neeraj:/mnt/c/Users/sakal$ 
Selecting previously unselected package python3-kerberos.
Preparing to unpack .../05-python3-kerberos_1.1.14-3.1build9_amd64.deb ...
Unpacking python3-kerberos (1.1.14-3.1build9) ...
Selecting previously unselected package python3-nacl.
Preparing to unpack .../06-python3-nacl_1.5.0-4build1_amd64.deb ...
Unpacking python3-nacl (1.5.0-4build1) ...
Selecting previously unselected package python3-ntlm-auth.
Preparing to unpack .../07-python3-ntlm-auth_1.5.0-1_all.deb ...
Unpacking python3-ntlm-auth (1.5.0-1) ...
Selecting previously unselected package python3-paramiko.
Preparing to unpack .../08-python3-paramiko_2.12.0-2ubuntu4.1_all.deb ...
Unpacking python3-paramiko (2.12.0-2ubuntu4.1) ...
Selecting previously unselected package python3-requests_ntlm.
Preparing to unpack .../09-python3-requests_ntlm_1.1.0-3_all.deb ...
Unpacking python3-requests_ntlm (1.1.0-3) ...
Selecting previously unselected package python3-xmldict.
Preparing to unpack .../10-python3-xmldict_0.13.0-1ubuntu0.24.04.1_all.deb ...
Unpacking python3-xmldict (0.13.0-1ubuntu0.24.04.1) ...
Selecting previously unselected package python3-winrm.
Preparing to unpack .../11-python3-winrm_0.4.3-2_all.deb ...
Unpacking python3-winrm (0.4.3-2) ...
Selecting previously unselected package sshpass.
Preparing to unpack .../12-sshpass_1.09-1_amd64.deb ...
Unpacking sshpass (1.09-1)
Setting up python3-ntlm-auth (1.5.0-1) ...
Setting up python3-resolvelib (1.0.1-1) ...
Setting up python3-kerberos (1.1.14-3.1build9) ...
Setting up sshpass (1.09-1) ...
Setting up python3-xmldict (0.13.0-1ubuntu0.24.04.1) ...
Setting up python3-packaging (24.0-1) ...
Setting up python3-jmespath (1.0.1-1) ...
Setting up python3-nacl (1.5.0-4build1) ...
Setting up python3-requests_ntlm (1.1.0-3) ...
Setting up ansible-core (2.19.3-1ppa-noble) ...
Setting up python3-winrm (0.4.3-2) ...
Setting up ansible (12.1.0-1ppa-noble) ...
Setting up python3-paramiko (2.12.0-2ubuntu4.1) ...
Processing triggers for man-db (2.12.0-4build2) ...
klu@Neeraj:/mnt/c/Users/sakal$ 
```

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```
Unpacking python3-ntlm-auth (1.5.0-1) ...
Selecting previously unselected package python3-paramiko.
Preparing to unpack .../08-python3-paramiko_2.12.0-2ubuntu4.1_all.deb ...
Unpacking python3-paramiko (2.12.0-2ubuntu4.1) ...
Selecting previously unselected package python3-requests_ntlm.
Preparing to unpack .../09-python3-requests_ntlm_1.1.0-3_all.deb ...
Unpacking python3-requests_ntlm (1.1.0-3) ...
Selecting previously unselected package python3-xmldict.
Preparing to unpack .../10-python3-xmldict_0.13.0-1ubuntu0.24.04.1_all.deb ...
Unpacking python3-xmldict (0.13.0-1ubuntu0.24.04.1) ...
Selecting previously unselected package python3-winrm.
Preparing to unpack .../11-python3-winrm_0.4.3-2_all.deb ...
Unpacking python3-winrm (0.4.3-2) ...
Selecting previously unselected package sshpass.
Preparing to unpack .../12-sshpass_1.09-1_amd64.deb ...
Unpacking sshpass (1.09-1)
Setting up python3-ntlm-auth (1.5.0-1) ...
Setting up python3-resolvelib (1.0.1-1) ...
Setting up python3-kerberos (1.1.14-3.1build9) ...
Setting up sshpass (1.09-1) ...
Setting up python3-xmldict (0.13.0-1ubuntu0.24.04.1) ...
Setting up python3-packaging (24.0-1) ...
Setting up python3-jmespath (1.0.1-1) ...
Setting up python3-nacl (1.5.0-4build1) ...
Setting up python3-requests_ntlm (1.1.0-3) ...
Setting up ansible-core (2.19.3-1ppa-noble) ...
Setting up python3-winrm (0.4.3-2) ...
Setting up ansible (12.1.0-1ppa-noble) ...
Setting up python3-paramiko (2.12.0-2ubuntu4.1) ...
Processing triggers for man-db (2.12.0-4build2) ...
klu@Neeraj:/mnt/c/Users/sakal$ ansible --version
ansible [core 2.19.3]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ['~/home/klu/.ansible/plugins/modules', '/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python3/dist-packages/ansible
  ansible collection location = /home/klu/.ansible/collections:/usr/share/ansible/collections
  executable location = /usr/bin/ansible
  python version = 3.12.3 (main, Aug 14 2025, 17:47:21) [GCC 13.3.0] (/usr/bin/python3)
  jinja version = 3.1.2
  pyyaml version = 6.0.1 (with libyaml v0.2.5)
klu@Neeraj:/mnt/c/Users/sakal$ 
```

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04-11-2025

```
klu@Neeraj:/mnt/c/Users/sakal$ sudo mkdir -p /etc/apt/keyrings
curl -fsSL https://pkgs.k8s.io/core/stable:v1.30/deb/Release.key | \
sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
echo "deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] \
https://pkgs.k8s.io/core/stable:v1.30/deb/" | \
sudo tee /etc/apt/sources.list.d/kubernetes.list
deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] https://pkgs.k8s.io/core/stable:v1.30/deb/
klu@Neeraj:/mnt/c/Users/sakal$
```

```
klu@Neeraj:/mnt/c/Users/sakal$ sudo apt update
Hit:1 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:3 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:4 https://ppa.launchpadcontent.net/ansible/ubuntu noble InRelease
Hit:5 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Get:2 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/core:/stable:v1.30/deb InRelease [1192 B]
Get:6 https://prod-cdn.packages.k8s.io/repositories/isv:/kubernetes:/core:/stable:v1.30/deb Packages [20.3 kB]
Hit:7 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Fetched 21.5 kB in 2s (12.8 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
All packages are up to date.
klu@Neeraj:/mnt/c/Users/sakal$
```

```
klu@Neeraj:/mnt/c/Users/sakal$ sudo apt install -y kubectl
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  libllvm19
Use 'sudo apt autoremove' to remove it.
The following NEW packages will be installed:
  kubectl
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 10.9 MB of archives.
After this operation, 52.0 MB of additional disk space will be used.
Get:1 https://prod-cdn.packages.k8s.io/repositories/isv:/core:/stable:/v1.30/deb kubectl 1.30.14-1.1 [10.9 MB]
Fetched 10.9 MB in 7s (1518 kB/s)
Selecting previously unselected package kubectl.
(Reading database ... 72822 files and directories currently installed.)
Preparing to unpack .../kubectl_1.30.14-1.1_amd64.deb ...
Unpacking kubectl (1.30.14-1.1) ...
Setting up kubectl (1.30.14-1.1) ...
klu@Neeraj:/mnt/c/Users/sakal$
```

```
klu@Neeraj:/mnt/c/Users/sakal$ kubectl version --client
Client Version: v1.30.14
Kustomize Version: v5.0.4-0-20230601165947-6ce0bf390ce3
klu@Neeraj:/mnt/c/Users/sakal$
```

```
klu@Neeraj:/mnt/c/Users/sakal$ curl -sfl https://get.k3s.io | sh -
[INFO]  Finding release for channel stable
[INFO]  Using v1.33.5+k3s1 as release
[INFO]  Downloading hash https://github.com/k3s-io/k3s/releases/download/v1.33.5+k3s1/sha256sum-amd64.txt
[INFO]  Downloading binary https://github.com/k3s-io/k3s/releases/download/v1.33.5+k3s1/k3s
[INFO]  Verifying binary download
[INFO]  Installing k3s to /usr/local/bin/k3s
[INFO]  Skipping installation of SELinux RPM
[INFO]  Skipping /usr/local/bin/kubectl symlink to k3s, command exists in PATH at /usr/bin/kubectl
[INFO]  Creating /usr/local/bin/crictl symlink to k3s
[INFO]  Creating killall script /usr/local/bin/k3s-killall.sh
[INFO]  Creating uninstall script /usr/local/bin/k3s-uninstall.sh
[INFO]  env: Creating environment file /etc/systemd/system/k3s.service.env
[INFO]  systemd: Creating service file /etc/systemd/system/k3s.service
[INFO]  systemd: Enabling k3s unit
Created symlink /etc/systemd/system/multi-user.target.wants/k3s.service → /etc/systemd/system/k3s.service.
[INFO]  Host iptables-save/iptables-restore tools not found
[INFO]  Host ip6tables-save/ip6tables-restore tools not found
[INFO]  systemd: Starting k3s
klu@Neeraj:/mnt/c/Users/sakal$
```

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```
[INFO]  Creating /usr/local/bin/ctr symlink to k3s
[INFO]  Creating killall script /usr/local/bin/k3s-killall.sh
[INFO]  Creating uninstall script /usr/local/bin/k3s-uninstall.sh
[INFO]  env: Creating environment file /etc/systemd/system/k3s.service.env
[INFO]  systemd: Creating service file /etc/systemd/system/k3s.service
[INFO]  systemd: Enabling k3s unit
Created symlink /etc/systemd/system/multi-user.target.wants/k3s.service → /etc/systemd/system/k3s.service.
[INFO]  Host iptables-save/iptables-restore tools not found
[INFO]  Host ip6tables-save/ip6tables-restore tools not found
[INFO]  systemd: Starting k3s
klu@Neeraj:/mnt/c/Users/sakal$ sudo systemctl status k3s
● k3s.service - Lightweight Kubernetes
   Loaded: loaded (/etc/systemd/system/k3s.service; enabled; preset: enabled)
     Active: active (running) since Tue 2025-11-04 16:01:46 UTC; 24s ago
       Docs: https://k3s.io
   Process: 5758 ExecStartPre=/sbin/modprobe br_netfilter (code=exited, status=0/SUCCESS)
   Process: 5758 ExecStartPre=/sbin/modprobe overlay (code=exited, status=0/SUCCESS)
 Main PID: 5758 (k3s-server)
   Tasks: 157
      Memory: 650.0M (peak: 661.4M)
        CPU: 23.10s
      CGroup: /system.slice/k3s.service
              └─5758 /usr/local/bin/k3s server
                  ├─5823 containerd " "
                  ├─6667 /var/lib/rancher/k3s/data/86a616cdf0fb57fa13670ac5a16f1699f4b2be4772e842d97904c69698ffdc2/bin/containerd-shim-runc-v2 -namespace k8s.io
                  ├─6697 /var/lib/rancher/k3s/data/86a616cdf0fb57fa13670ac5a16f1699f4b2be4772e842d97904c69698ffdc2/bin/containerd-shim-runc-v2 -namespace k8s.io
                  ├─6728 /var/lib/rancher/k3s/data/86a616cdf0fb57fa13670ac5a16f1699f4b2be4772e842d97904c69698ffdc2/bin/containerd-shim-runc-v2 -namespace k8s.io
                  ├─6753 /var/lib/rancher/k3s/data/86a616cdf0fb57fa13670ac5a16f1699f4b2be4772e842d97904c69698ffdc2/bin/containerd-shim-runc-v2 -namespace k8s.io
                  ├─6769 /var/lib/rancher/k3s/data/86a616cdf0fb57fa13670ac5a16f1699f4b2be4772e842d97904c69698ffdc2/bin/containerd-shim-runc-v2 -namespace k8s.io
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Started tunnel to 172.29.5.50:6443"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Stopped tunnel to 127.0.0.1:6443"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Connecting to proxy" url="wss://172.29.5.50:6443/v1-k3s/connect"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Proxy done" err="context canceled" url="wss://127.0.0.1:6443/v1-k3s/connect"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="error in remotemaler server [400]: websocket: close 1006 (abnormal closure):"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Handling backend connection request [neeraj]"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Connected to proxy" url="wss://172.29.5.50:6443/v1-k3s/connect"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Remotedialer connected to proxy" url="wss://172.29.5.50:6443/v1-k3s/connect"
Nov 04 16:01:57 Neeraj k3s[5758]: I1104 16:01:57.197286 5758 kuberuntime_manager.go:1746] "Updating runtime config through cri with podcidr" CIDR="19.42.0.0/24"
Nov 04 16:01:57 Neeraj k3s[5758]: I1104 16:01:57.200832 5758 kubelet_network.go:61] "Updating Pod CIDR" originalPodCIDR="" newPodCIDR="10.42.0.0/24"
lines 1-29/29 (END)
```

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```
[INFO] env: Creating environment file /etc/systemd/system/k3s.service.env
[INFO] systemd: Creating service file /etc/systemd/system/k3s.service
[INFO] systemd: Enabling k3s unit
Created symlink /etc/systemd/system/multi-user.target.wants/k3s.service → /etc/systemd/system/k3s.service.
[INFO] Host iptables-save/iptables-restore tools not found
[INFO] Host ip6tables-save/ip6tables-restore tools not found
[INFO] systemd: Starting k3s
klu@Neeraj:/mnt/c/Users/sakal$ sudo systemctl status k3s
● k3s.service - Lightweight Kubernetes
   Loaded: loaded (/etc/systemd/system/k3s.service; enabled; preset: enabled)
     Active: active (running) since Tue 2025-11-04 16:01:46 UTC; 24s ago
       Docs: https://k3s.io
    Process: 5754 ExecStartPre=/sbin/modprobe br_netfilter (code=exited, status=0/SUCCESS)
    Process: 5755 ExecStartPre=/sbin/modprobe overlay (code=exited, status=0/SUCCESS)
   Main PID: 5758 (k3s-server)
      Tasks: 157
     Memory: 650.0M (peak: 661.4M)
        CPU: 23.10s
       CGroup: /system.slice/k3s.service
           ├─5758 "/usr/local/bin/k3s server"
           ├─5823 "containererd"
           ├─6667 /var/lib/rancher/k3s/data/86a616cdfa0fb57fa13670ac5a16f1699f4b2be4772e842d97904c69698ffdc2/bin/containerd-shim-runc-v2 -namespace k8s.io
           ├─6697 /var/lib/rancher/k3s/data/86a616cdfa0fb57fa13670ac5a16f1699f4b2be4772e842d97904c69698ffdc2/bin/containerd-shim-runc-v2 -namespace k8s.io
           ├─6728 /var/lib/rancher/k3s/data/86a616cdfa0fb57fa13670ac5a16f1699f4b2be4772e842d97904c69698ffdc2/bin/containerd-shim-runc-v2 -namespace k8s.io
           ├─6753 /var/lib/rancher/k3s/data/86a616cdfa0fb57fa13670ac5a16f1699f4b2be4772e842d97904c69698ffdc2/bin/containerd-shim-runc-v2 -namespace k8s.io
           └─6769 /var/lib/rancher/k3s/data/86a616cdfa0fb57fa13670ac5a16f1699f4b2be4772e842d97904c69698ffdc2/bin/containerd-shim-runc-v2 -namespace k8s.io

Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Started tunnel to 172.29.5.50:6443"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Stopped tunnel to 127.0.0.1:6443"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Connecting to proxy" url="ws://172.29.5.50:6443/v1-k3s/connect"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Proxy done" err="context canceled" url="ws://127.0.0.1:6443/v1-k3s/connect"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="error in remotedialer server [406]: websocket: close 1006 (abnormal closure):"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Handling backend connection request [neeraj]"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Connected to proxy" url="ws://172.29.5.50:6443/v1-k3s/connect"
Nov 04 16:01:53 Neeraj k3s[5758]: time="2025-11-04T16:01:53Z" level=info msg="Remotedialer connected to proxy" url="ws://172.29.5.50:6443/v1-k3s/connect"
Nov 04 16:01:57 Neeraj k3s[5758]: I1104 16:01:57.197286 5758 kuberuntime_manager.go:1746] "Updating runtime config through cri with podcidr" CIDR="10.42.0.0/24"
Nov 04 16:01:57 Neeraj k3s[5758]: I1104 16:01:57.200832 5758 kublet_network.go:61] "Updating Pod CIDR" originalPodCIDR="" newPodCIDR="10.42.0.0/24"

klu@Neeraj:/mnt/c/Users/sakal$ ls /etc/rancher/k3s/k3s.yaml
/etc/rancher/k3s/k3s.yaml
klu@Neeraj:/mnt/c/Users/sakal$
```

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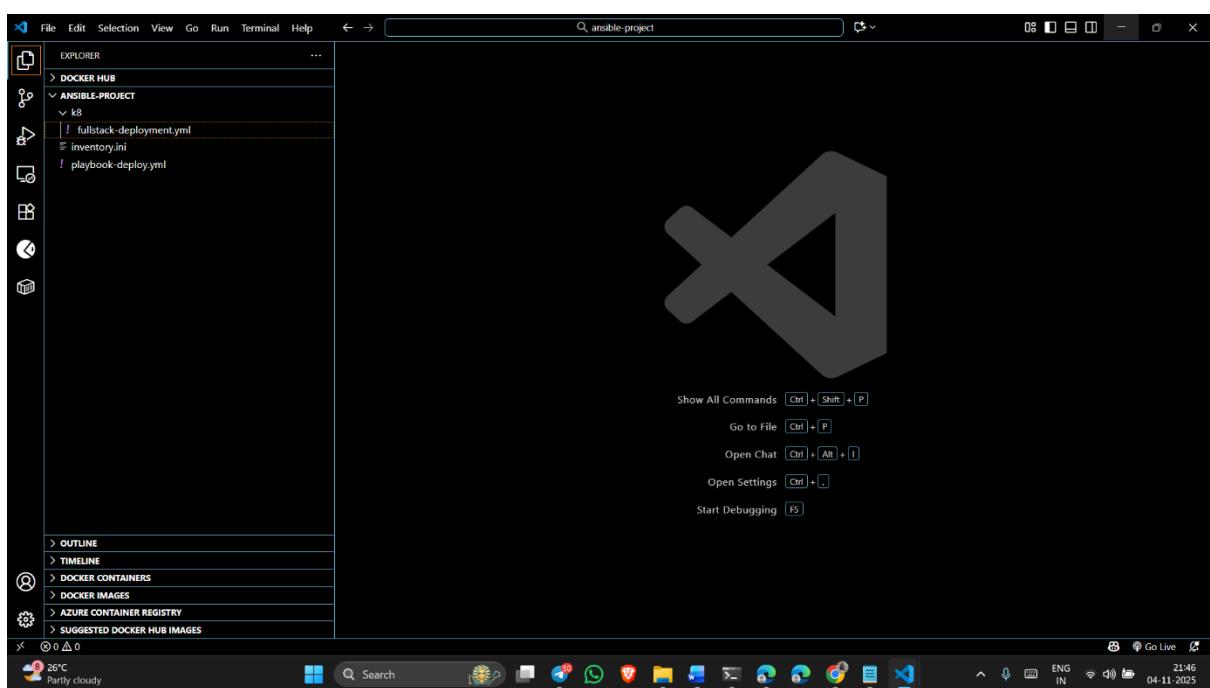
```
klu@Neeraj:/mnt/c/Users/sakal$ sudo chmod 644 /etc/rancher/k3s/k3s.yaml
mkdir -p ~/.kube
sudo cp /etc/rancher/k3s/k3s.yaml ~/.kube/config
sudo chown ${id}~:${id} -g ~/.kube/config
klu@Neeraj:/mnt/c/Users/sakal$
```

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```
klu@Neeraj:/mnt/c/Users/sal > Windows PowerShell > + <
klu@Neeraj:/mnt/c/Users/sakal$ sudo chmod 644 /etc/rancher/k3s/k3s.yaml
mkdir -p ~/.kube
sudo cp /etc/rancher/k3s/k3s.yaml ~/.kube/config
sudo chown $(id -u:$id -g) ~/.kube/config
klu@Neeraj:/mnt/c/Users/sakal$ kubectl get nodes
NAME      STATUS   ROLES      AGE     VERSION
neeraj    Ready    control-plane, master   2m39s   v1.33.5+k3s1
klu@Neeraj:/mnt/c/Users/sakal$
```

```
klu@Neeraj:/mnt/c/Users/sal > Windows PowerShell > + <
klu@Neeraj:/mnt/c/Users/sakal$ mkdir ansible-project
klu@Neeraj:/mnt/c/Users/sakal$ cd ansible-project
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ |
```

```
klu@Neeraj:/mnt/c/Users/sakal$ mkdir ansible-project
klu@Neeraj:/mnt/c/Users/sakal$ cd ansible-project
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ code .
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$
```



```
klu@Neeraj: /mnt/c/Users/sakal/ansible-project $ ansible-playbook -i inventory.ini playbook-deploy.yml
```

```
playbook-deploy.yml
```

```
---
```

```
1 2   - name: Fullstack App Deployment on K3s (wsl)
2 3     hosts: localhost
3 4     connection: local
3 5     gather_facts: yes
3 6
3 7     vars:
3 8       k8s_namespace: fullstack-app
3 9       k8s_manifest_path: "./k8s/fullstack-deployment.yml"
3 10      frontend_nodeport: 30080
3 11      backend_nodeport: 30025
3 12      kubeconfig: /etc/rancher/k3s/k3s.yaml
3 13
3 14     tasks:
3 15       # -----
3 16       # ⚡ Gather system facts
3 17       # -----
3 18       - name: Gather system facts
3 19         | ansible.builtin.setup:
3 20
3 21       # -----
3 22       # 🛡 Ensure K3s service is running
3 23       # -----
3 24       - name: Ensure K3s service is running
3 25         | ansible.builtin.service:
3 26           |   name: k3s
3 27           |   state: started
3 28           |   enabled: yes
3 29
3 30       # -----
3 31       # 🛡 Apply Kubernetes Manifests
3 32       # -----
3 33       - name: Apply Kubernetes manifests
3 34         | command: kubectl apply -f {{ k8s_manifest_path }}
3 35         | environment:
3 36           |   KUBECONFIG: "{{ kubeconfig }}"
3 37
```

The screenshot shows the Visual Studio Code interface with the title bar "ansible-project". The left sidebar displays the "EXPLORER" view with sections for "DOCKER HUB", "ANSIBLE PROJECT", "inventory.ini", and "playbook-deploy.yml". The main editor area shows the "inventory.ini" file:

```
1 [local]
2 localhost ansible_connection=local ansible_python_interpreter=/usr/bin/python3
```

The status bar at the bottom indicates "Ln 2, Col 79" and "21:56 04-11-2025".

The screenshot shows the Visual Studio Code interface with the title bar "ansible-project". The left sidebar displays the "EXPLORER" view with sections for "DOCKER HUB", "ANSIBLE PROJECT", "fullstack-deployment.yml", "inventory.ini", and "playbook-deploy.yml". The main editor area shows the "fullstack-deployment.yml" file:

```
1 apiVersion: v1
2 kind: Namespace
3 metadata:
4   name: fullstack-app
5 ...
6 # -----
7 # MySQL Deployment & Service
8 # -----
9 apiVersion: apps/v1
10 kind: Deployment
11 metadata:
12   name: mysql-deployment
13   namespace: fullstack-app
14 spec:
15   replicas: 1
16   selector:
17     matchLabels:
18       app: mysql
19   template:
20     metadata:
21       labels:
22         app: mysql
23     spec:
24       containers:
25         - name: mysql
26           image: mysql:8.0
27           ports:
28             - containerPort: 3306
29           env:
30             - name: MYSQL_ROOT_PASSWORD
31               value: password # ▲ change this for production
32             - name: MYSQL_DATABASE
33               value: projectdb
34             volumeMounts:
35               - name: mysql-storage
36                 mountPath: /var/lib/mysql
37       volumes:
```

The status bar at the bottom indicates "Ln 130, Col 17" and "21:57 04-11-2025".

```
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ ansible-playbook -i inventory.ini playbook-deploy.yml
PLAY [Fullstack App Deployment on K3s (WSL)] ****
TASK [Gathering Facts] ****
ok: [localhost]
TASK [Gather system facts] ****
ok: [localhost]
TASK [Ensure K3s service is running] ****
ok: [localhost]
TASK [Apply Kubernetes manifests] ****
changed: [localhost]
TASK [Wait for MySQL Pod] ****
changed: [localhost]
TASK [Pause before backend starts] ****
Pausing for 20 seconds
(ctrl+C then 'C' = continue early, ctrl+C then 'A' = abort)
ok: [localhost]
TASK [Wait for backend pods] ****
changed: [localhost]
TASK [Wait for frontend pods] ****
changed: [localhost]
TASK [Forward backend NodePort 30025 -> 2000 (background)] ****
changed: [localhost]
TASK [Forward frontend NodePort 30080 -> 80 (background)] ****
changed: [localhost]
TASK [Show accessible URLs] ****
ok: [localhost] => {
  "msg": [
    "Frontend available at: http://localhost:30080",
  ]
}
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$
```

```
[sudo] password for klu:
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ mkdir -p ~/.kube
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ sudo cp /etc/rancher/k3s.yaml ~/.kube/config
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ sudo chown $(id -u):$(id -g) ~/.kube/config
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ kubectl get nodes
NAME      STATUS   ROLES      AGE   VERSION
neeraj     Ready    control-plane,master   53m   v1.33.5+k3s1
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ kubectl get all -n fullstack-app
NAME                           READY   STATUS    RESTARTS   AGE
pod/backend-deployment-6dc5d64f99-2lgzr   1/1    Running   0          25m
pod/backend-deployment-6dc5d64f99-44u8k   1/1    Running   0          25m
pod/frontend-deployment-796848dff5-9jrz8  1/1    Running   0          25m
pod/frontend-deployment-796848dff5-kljr7  1/1    Running   0          25m
pod/mysql-deployment-64fcc6bd5-h8ngn    1/1    Running   0          25m
NAME           TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
service/backend-service   NodePort    10.43.176.18 <none>       2000:30025/TCP   25m
service/frontend-service  NodePort    10.43.125.170 <none>       80:30080/TCP   25m
service/mysql-service     ClusterIP   10.43.52.164  <none>        3306/TCP    25m
NAME           READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/backend-deployment   2/2     2           2           25m
deployment.apps/frontend-deployment  2/2     2           2           25m
deployment.apps/mysql-deployment    1/1     1           1           25m
NAME           DESIRED  CURRENT   READY   AGE
replicaset.apps/backend-deployment-6dc5d64f99  2        2           2           25m
replicaset.apps/frontend-deployment-796848dff5  2        2           2           25m
replicaset.apps/mysql-deployment-64fcc6bd5     1        1           1           25m
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$
```

```
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ kubectl get pods -n fullstack-app
NAME                               READY   STATUS    RESTARTS   AGE
backend-deployment-6dc5d64f99-2lgzr  1/1    Running   0          27m
backend-deployment-6dc5d64f99-4448k  1/1    Running   0          27m
frontend-deployment-796848dff5-9jzp28 1/1    Running   0          27m
frontend-deployment-796848dff5-k1jr7  1/1    Running   0          27m
mysql-deployment-64fcc6bd5-h8ngh    1/1    Running   0          27m
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$
```

```
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ kubectl logs -l app=backend -n fullstack-app -f
status varchar(255) not null,
title varchar(255) not null,
primary key (id)
) engine=InnoDB
2025-11-04T16:43:03.817Z INFO 1 --- [springbootbackend] [           main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2025-11-04T16:43:02.213Z WARN 1 --- [springbootbackend] [           main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rendering. Explicitly configure spring.jpa.open-in-view to disable this warning
2025-11-04T16:43:02.307Z INFO 1 --- [springbootbackend] [           main] o.s.v.b.OptionalValidatorFactoryBean : Failed to set up a Bean Validation provider: jakarta.validation.NoProviderFoundException: Unable to create a Configuration, because no Jakarta Bean Validation provider could be found. Add a provider like Hibernate Validator (RI) to your classpath.
2025-11-04T16:43:03.190Z INFO 1 --- [springbootbackend] [           main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 2000 (http) with context path '/'
2025-11-04T16:43:03.217Z INFO 1 --- [springbootbackend] [           main] c.klef.dev.SpringbootbackendApplication : Started SpringbootbackendApplication in 7.145 seconds (process running for 7.929)
Project Backend is Running Successfully ....
at com.zaxxer.hikari.pool.HikariProxyStatement.execute(HikariProxyStatement.java) ~[HikariCP-6.3.0.jar!/:na]
at org.hibernate.tool.schema.internal.exec.GenerationTargetToDatabase.accept(GenerationTargetToDatabase.java:80) ~[hibernate-core-6.6.18.Final.jar!/6.6.18.Final]
... 42 common frames omitted
2025-11-04T16:43:02.106Z INFO 1 --- [springbootbackend] [           main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2025-11-04T16:43:02.673Z WARN 1 --- [springbootbackend] [           main] JpaBaseConfiguration$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
2025-11-04T16:43:02.771Z INFO 1 --- [springbootbackend] [           main] o.s.v.b.OptionalValidatorFactoryBean : Failed to set up a Bean Validation provider: jakarta.validation.NoProviderFoundException: Unable to create a Configuration, because no Jakarta Bean Validation provider could be found. Add a provider like Hibernate Validator (RI) to your classpath.
2025-11-04T16:43:03.525Z INFO 1 --- [springbootbackend] [           main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 2000 (http) with context path '/'
2025-11-04T16:43:03.547Z INFO 1 --- [springbootbackend] [           main] c.klef.dev.SpringbootbackendApplication : Started SpringbootbackendApplication in 7.455 seconds (process running for 8.254)
Project Backend is Running Successfully ...
```

```
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ kubectl logs -l app=backend -n fullstack-app -f
status varchar(255) not null,
title varchar(255) not null,
primary key (id)
) engine=InnoDB
2025-11-04T16:43:01.817Z INFO 1 --- [springbootbackend] [           main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2025-11-04T16:43:02.213Z WARN 1 --- [springbootbackend] [           main] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by default. Therefore, database queries may be performed during view rendering. Explicitly configure spring.jpa.open-in-view to disable this warning
2025-11-04T16:43:02.307Z INFO 1 --- [springbootbackend] [           main] o.s.v.b.OptionalValidatorFactoryBean : Failed to set up a Bean Validation provider: jakarta.validation.NoProviderNotFoundException: Unable to create a Configuration, because no Jakarta Bean Validation provider could be found. Add a provider like Hibernate Validator (RIL) to your classpath.
2025-11-04T16:43:03.190Z INFO 1 --- [springbootbackend] [           main] o.s.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 2000 (http) with context path '/'
2025-11-04T16:43:03.217Z INFO 1 --- [springbootbackend] [           main] c.klef.dev.SpringbootbackendApplication : Started SpringbootbackendApplication in 7.145 seconds (process running for 7.929)
Project Backend is Running Successfully ....
at com.zaxxer.hikari.pool.HikariProxyStatement.execute(HikariProxyStatement.java ~[HikariCP-6.3.0.jar!/:na]
at org.hibernate.tool.schema.internal.exec.GenerationTargetToDatabase.accept(GenerationTargetToDatabase.java:80) ~[hibernate-core-6.6.18.Final.jar!/6.6.18.Final]
... 42 common frames omitted
2025-11-04T16:43:02.106Z INFO 1 --- [springbootbackend] [           main] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for persistence unit 'default'
2025-11-04T16:43:02.673Z WARN 1 --- [springbootbackend] [           main] JpaBaseConfiguration$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
2025-11-04T16:43:02.771Z INFO 1 --- [springbootbackend] [           main] o.s.v.b.OptionalValidatorFactoryBean : Failed to set up a Bean Validation provider: jakarta.validation.NoProviderNotFoundException: Unable to create a Configuration, because no Jakarta Bean Validation provider could be found. Add a provider like Hibernate Validator (RIL) to your classpath.
2025-11-04T16:43:03.525Z INFO 1 --- [springbootbackend] [           main] o.s.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 2000 (http) with context path '/'
2025-11-04T16:43:03.547Z INFO 1 --- [springbootbackend] [           main] c.klef.dev.SpringbootbackendApplication : Started SpringbootbackendApplication in 7.455 seconds (process running for 8.254)
Project Backend is Running Successfully ....
^C
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ ps aux | grep kubectl
klu      12259  0.0  0.5 5473604 45108 ?        Sl   16:42  0:00 kubectl port-forward svc/backend-service 30025:2000 -n fullstack-app
klu      12306  0.0  0.5 5473860 44996 ?        Sl   16:42  0:00 kubectl port-forward svc/frontend-service 30080:80 -n fullstack-app
klu      13207  0.0  0.0  4092  2048 pts/0   S+   17:03  0:00 grep --color=auto kubectl
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ |
```

```
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ ip addr show eth0 | grep inet
inet 172.29.5.50/20 brd 172.29.15.255 scope global eth0
inet6 fe80::215:5dff:feec:f9ce/64 scope link
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ |
```

The screenshot shows a web-based Task Manager application. At the top, there is a header bar with tabs for 'Chat | CI/CD CLOUD DEV', 'React App', and '172.29.5.50:30025/api/tasks/'. Below the header, a message says 'Import favourites | For quick access, place your favourites here on the favourites bar. Looking for your favourites? Check your profiles'. The main content area has a title 'Task Manager' and two buttons: 'Dashboard' and 'Task Board'. A large 'Add Task' button is prominently displayed. Below it is a form with fields for 'Title' (with placeholder 'Enter task title'), 'Description' (placeholder 'Enter task description'), 'Start Date' (placeholder 'dd-mm-yyyy'), 'End Date' (placeholder 'dd-mm-yyyy'), 'Priority' (dropdown menu with placeholder '... Select Priority ...'), and an 'Add Task' button. Below the form is a search bar with placeholder 'Search by any field (id, title, description, priority, status)' and a 'Clear' button. A table titled 'All Tasks' is shown, with columns: ID, TITLE, DESCRIPTION, START, END, PRIORITY, STATUS, and ACTIONS. A message 'No matching tasks found' is displayed in the table's body. The bottom of the screen shows a Windows taskbar with various icons and system status information.

This screenshot shows the same Task Manager application, but the main content area is completely blank. The header, sidebar, and footer are identical to the first screenshot. The taskbar at the bottom is also visible.

The screenshot shows a web-based Task Manager application. At the top, there are three tabs: 'Chat | CI/CD CLOUD DEV', 'React App', and 'localhost:30025/api/tasks/'. The main content area has a dark header with 'Task Manager' on the left and 'Dashboard' and 'Task Board' on the right. Below this is a form titled '+ Add Task' with fields for Title, Description, Start Date, End Date, and Priority. A search bar at the bottom allows searching by id, title, description, priority, or status. Below the search bar is a table titled 'All Tasks' with columns: ID, TITLE, DESCRIPTION, START, END, PRIORITY, STATUS, and ACTIONS. A message 'No matching tasks found' is displayed in the table's body.

The screenshot shows a web-based Task API Demo application. The browser title bar includes 'localhost:30025/api/tasks/' and other tabs for 'Chat | CI/CD CLOUD DEV', 'React App', and 'localhost:30025/api/tasks/'. The main content area is a large white space with the text 'Task API Demo'. The browser's taskbar at the bottom shows various pinned icons and the date/time '04-11-2025 22:40'.

Screenshot of a web browser showing the task addition interface.

**Add Task Form:**

Title:	Description:	Start Date:	End Date:
Enter task title	Enter task description	dd-mm-yyyy	dd-mm-yyyy

Priority: --- Select Priority ---

**Success Message:** Task added successfully!

**Search Bar:** Search by any field (id, title, description, priority, status)

**Action Buttons:** Add Task

**All Tasks Table:**

ID	TITLE	DESCRIPTION	START	END	PRIORITY	STATUS	ACTIONS
58054	CICD	CICD	2025-11-04	2025-11-05	HIGH	ASSIGNED	<button>Edit</button> <button>Delete</button>
79092	CICD	MOOCS	2025-11-06	2025-11-10	MEDIUM	ASSIGNED	<button>Edit</button> <button>Delete</button>

Screenshot of a web browser showing the Task Board interface.

**Task Board Header:** Task Board

**Card 1 (Assigned):**

- Title:** CICD
- Description:** CICD
- Priority:** HIGH
- Start:** 2025-11-04
- End:** 2025-11-05
- Status:** Start

**Card 2 (Assigned):**

- Title:** CICD
- Description:** MOOCS
- Priority:** MEDIUM
- Start:** 2025-11-06
- End:** 2025-11-10
- Status:** Start

**Card Categories:**

- ASSIGNED
- PROGRESS
- COMPLETED
- REJECTED

A screenshot of a Windows desktop environment. At the top, there is a taskbar with several icons, including a search bar, file explorer, and various application icons. On the right side of the taskbar, there are system status indicators like battery level, signal strength, and the date and time (04-11-2025, 22:44). The main window is a browser displaying a JSON response from an API endpoint. The JSON data is pretty-printed and shows two tasks:

```
[  
  {  
    "id": 58054,  
    "title": "CICD",  
    "description": "CICD",  
    "startDate": "2025-11-04",  
    "endDate": "2025-11-05",  
    "priority": "HIGH",  
    "status": "ASSIGNED"  
  },  
  {  
    "id": 79992,  
    "title": "CICD",  
    "description": "MOOCS",  

```

The screenshot shows a browser window displaying the Swagger UI for a Task Management API. The API is version 1.0.0 and follows OAS 3.0. The task-controller section lists the following endpoints:

- PUT /api/tasks/updatestatus/{id}
- PUT /api/tasks/update/{id}
- POST /api/tasks/add
- GET /api/tasks/get/{id}
- GET /api/tasks/all
- GET /api/tasks/
- DELETE /api/tasks/delete/{id}

Below the browser is a Windows terminal window showing command-line operations:

```
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ ip addr show eht0 | grep inet
Device "eht0" does not exist.
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ ip addr show eth0 | grep inet
inet 172.29.5.56/20 brd 172.29.15.255 scope global eth0
    inet6 fe80::215:5dff:feec:f9ce/64 scope link
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ kubectl delete namespace fullstack-app
namespace "fullstack-app" deleted
```

```
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ ip addr show eth0 | grep inet
Device "eth0" does not exist.
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ ip addr show eth0 | grep inet
    inet 172.29.5.50/20 brd 172.29.15.255 scope global eth0
        inet6 fe80::215:5dff:feec:f9ce/64 scope link
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ kubectl delete namespace fullstack-app
Namespace "fullstack-app" deleted
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ ps aux | grep kubectl
klu      12259  0.0  0.5 5473684 46104 ?          Sl   16:42  0:01 kubectl port-forward svc/backend-service 30025:2000 -n fullstack-app
klu      12306  0.0  0.5 5473860 46020 ?          Sl   16:42  0:01 kubectl port-forward svc/frontend-service 30080:80 -n fullstack-app
klu      15080  0.0  0.0  4092  2048 pts/0    S+   17:23  0:00 grep --color=auto kubectl
Klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ pgrep a- kubectl
pgrep: only one pattern can be provided
Try 'pgrep --help' for more information.
Klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ pgrep -a kubectl
12259 kubectl port-forward svc/backend-service 30025:2000 -n fullstack-app
12306 kubectl port-forward svc/frontend-service 30080:80 -n fullstack-app
klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ sudo kill -9 12259
[sudo] password for klu:
Klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ sudo kill -9 12306
Klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ sudo kubectl stop k3s
error: unknown command "stop" for "kubectl"

Did you mean this?
    top
Klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ pgrep -a kubectl
Klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ ps aux | grep kubectl
klu      15165  0.0  0.0  4092  2048 pts/0    S+   17:25  0:00 grep --color=auto kubectl
Klu@Neeraj:/mnt/c/Users/sakal/ansible-project$ sudo kill -9 15165
kill: (15165): No such process
Klu@Neeraj:/mnt/c/Users/sakal/ansible-project$
```

```
26°C Partly cloudy          Search          ENG IN 22:55 04-11-2025
Windows PowerShell x + v
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\sakal> wsl -l -v
NAME      STATE      VERSION
* Ubuntu    Stopped     2
* docker-desktop Stopped     2
PS C:\Users\sakal>
```

wsl --install

wsl --update

wsl --list --online

wsl -d Ubuntu

Update and upgrade:

```
sudo apt update && sudo apt upgrade -y
```

python,pip install:

```
sudo apt install -y python3 python3-pip python3-venv
```

```
python3 --version
```

```
pip3 --version
```

basic dependencies:

```
sudo apt install -y software-properties-common git curl apt-transport-https ca-certificates gnupg lsb-release
```

#### 4 Install Ansible

```
sudo add-apt-repository --yes --update ppa:ansible/ansible
```

```
sudo apt install -y ansible
```

```
ansible --version
```

#### 5 Install kubectl (official stable v1.30 repo)

```
sudo mkdir -p /etc/apt/keyrings
```

```
curl -fsSL https://pkgs.k8s.io/core:/stable:/v1.30/deb/Release.key  
| \
```

```
sudo gpg --dearmor -o /etc/apt/keyrings/kubernetes-apt-keyring.gpg
```

```
echo "deb [signed-by=/etc/apt/keyrings/kubernetes-apt-keyring.gpg] \\"
```

```
https://pkgs.k8s.io/core:/stable:/v1.30/deb/ /" | \
```

```
sudo tee /etc/apt/sources.list.d/kubernetes.list
```

```
sudo apt update
```

```
sudo apt install -y kubectl
```

```
kubectl version --client
```

#### **6** If you already have K3s (Kubernetes lightweight cluster)

```
# Install K3s (lightweight Kubernetes)
```

```
curl -sfL https://get.k3s.io | sh -
```

```
# Check K3s service status
```

```
sudo systemctl status k3s
```

```
# Wait until it shows "active (running)"
```

```
# Verify if K3s config file exists now
```

```
ls /etc/rancher/k3s/k3s.yaml
```

```
# Set permissions and copy config to your user  
sudo chmod 644 /etc/rancher/k3s/k3s.yaml  
mkdir -p ~/.kube  
sudo cp /etc/rancher/k3s/k3s.yaml ~/.kube/config  
sudo chown $(id -u):$(id -g) ~/.kube/config
```

```
# Verify K3s node is registered
```

```
kubectl get nodes
```

```
create ansible directory:
```

```
mkdir ansible-project
```

```
cd ansible-project
```

```
create and update:
```

```
ansible-playbook -i inventory.ini playbook-deploy.yml
```

```
if not forwarding:
```

```
nohup kubectl port-forward svc/backend-service 30025:2000 -n  
fullstack-app >/tmp/backend.log 2>&1 &  
  
nohup kubectl port-forward svc/frontend-service 30080:80 -n  
fullstack-app >/tmp/frontend.log 2>&1 &
```

