National Textile University, Faisalabad

Department of Computer Science

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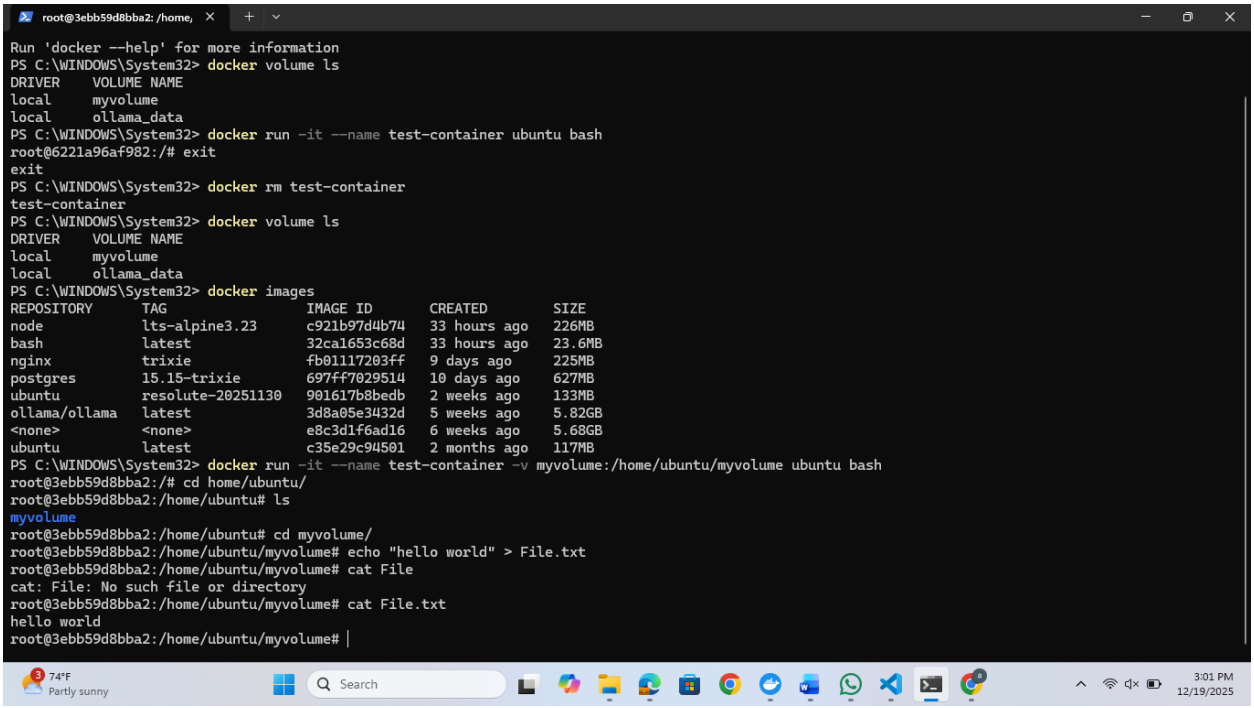
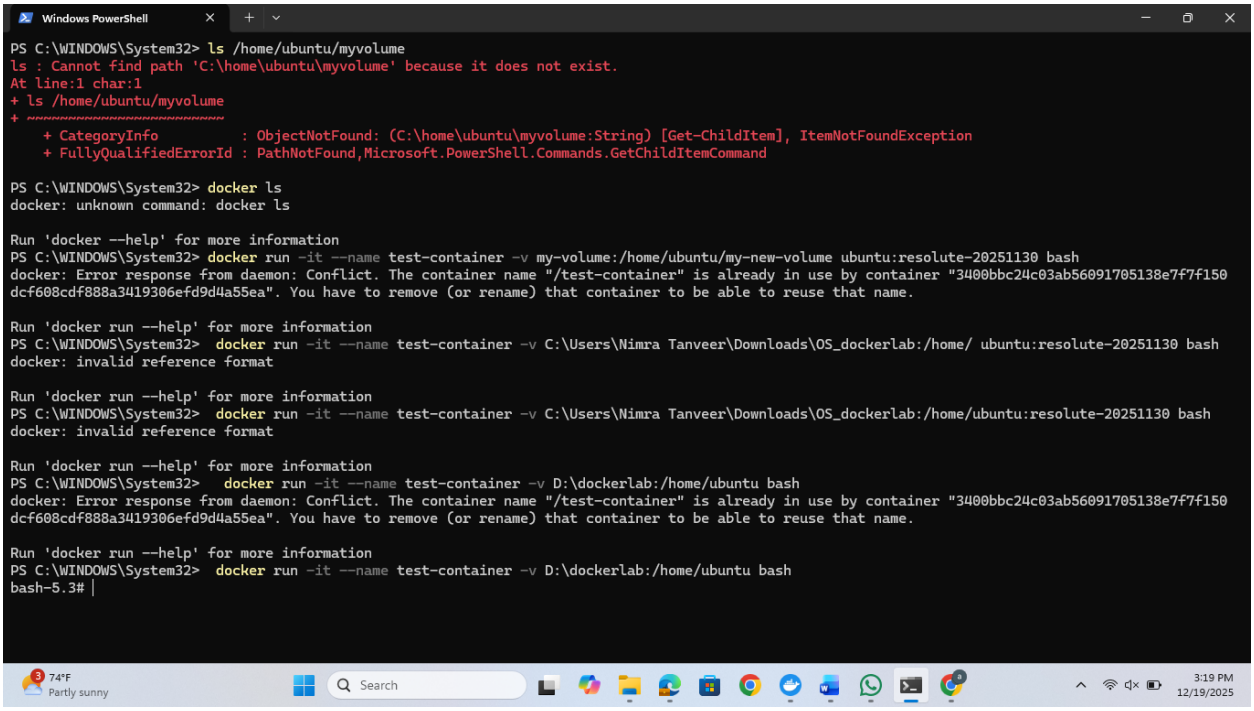
Class:	BSSE A 5th
Registration No:	23-NTU-CS-1201
Assignment:	Lab 12
Course Name:	Operating Systems
Submitted To:	Sir Nasir Mahmood

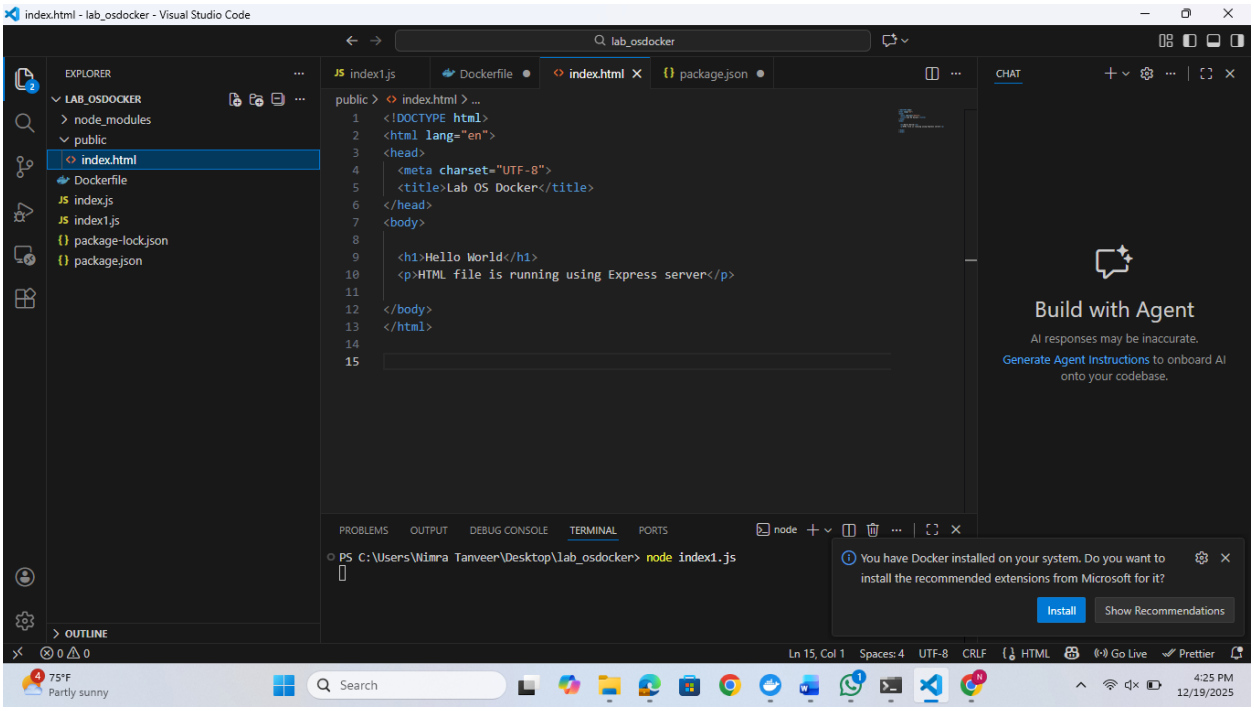
Docker Lab 02: Data Persistence, Custom Images, Networking & Docker Compose

Volume commands:

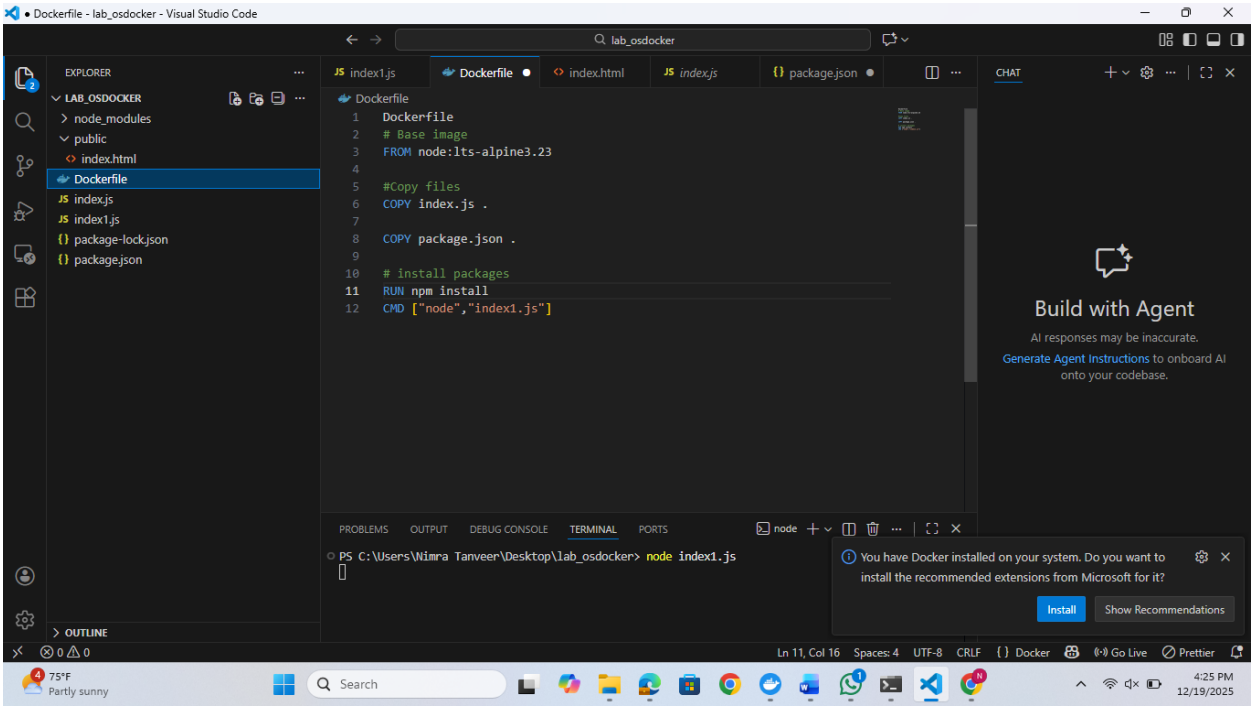



Windows PowerShell
PS C:\WINDOWS\System32> ls /home/ubuntu/myvolume
ls : Cannot find path 'C:\home\ubuntu\myvolume' because it does not exist.
At line:1 char:1
+ ls /home/ubuntu/myvolume
+ ~~~~~~~~~~~~~~~~~~~~~~~~
+ CategoryInfo : ObjectNotFound: (C:\home\ubuntu\myvolume:String) [Get-ChildItem], ItemNotFoundException
+ FullyQualifiedErrorId : PathNotFound,Microsoft.PowerShell.Commands.GetChildItemCommand
PS C:\WINDOWS\System32> docker ls
docker: unknown command: docker ls
Run 'docker --help' for more information
PS C:\WINDOWS\System32> docker run -it --name test-container -v my-volume:/home/ubuntu/my-new-volume ubuntu:resolute-20251130 bash
docker: Error response from daemon: Conflict. The container name "/test-container" is already in use by container "3400bbc24c03ab56091705138e7f7f150dcf608cdf888a3419306efd9d4a55ea". You have to remove (or rename) that container to be able to reuse that name.
Run 'docker run --help' for more information
PS C:\WINDOWS\System32> docker run -it --name test-container -v C:\Users\Nimra Tanveer\Downloads\OS_dockerlab:/home/ ubuntu:resolute-20251130 bash
docker: invalid reference format
Run 'docker run --help' for more information
PS C:\WINDOWS\System32> docker run -it --name test-container -v C:\Users\Nimra Tanveer\Downloads\OS_dockerlab:/home/ubuntu:resolute-20251130 bash
docker: invalid reference format
Run 'docker run --help' for more information
PS C:\WINDOWS\System32> docker run -it --name test-container -v D:\dockerlab:/home/ubuntu bash
docker: Error response from daemon: Conflict. The container name "/test-container" is already in use by container "3400bbc24c03ab56091705138e7f7f150dcf608cdf888a3419306efd9d4a55ea". You have to remove (or rename) that container to be able to reuse that name.
Run 'docker run --help' for more information
PS C:\WINDOWS\System32> docker run -it --name test-container -v D:\dockerlab:/home/ubuntu bash
bash-5.3#
74°F
Partly sunny
Search
3:19 PM
12/19/2025

HTML INDEX


index.html - lab_osdocker - Visual Studio Code
lab_osdocker
EXPLORER
LAB_OSDOCKER
node_modules
public
index.html
Dockerfile
index.js
index1.js
package-lock.json
package.json
index1.js
Dockerfile
index.html
package.json
CHAT
public > index.html > ...
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Lab OS Docker</title>
</head>
<body>
<h1>Hello World</h1>
HTML file is running using Express server
</body>
</html>
Build with Agent
AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
node
PS C:\Users\Nimra Tanveer\Desktop\lab_osdocker> node index1.js
You have Docker installed on your system. Do you want to install the recommended extensions from Microsoft for it?
Install
Show Recommendations
OUTLINE
Ln 15, Col 1
Spaces: 4
UTF-8
CRLF
HTML
Go Live
Prettier
75°F
Partly sunny
Search
4:25 PM
12/19/2025

Docker file


• Dockerfile - lab_osdocker - Visual Studio Code
lab_osdocker
EXPLORER
LAB_OSDOCKER
node_modules
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index1.js
package-lock.json
package.json
index1.js
Dockerfile
index.html
index.js
package.json
CHAT
Dockerfile
Dockerfile
Base image
FROM node:lts-alpine3.23
#Copy files
COPY index.js .
COPY package.json .
install packages
RUN npm install
CMD ["node","index1.js"]
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Search
4:25 PM
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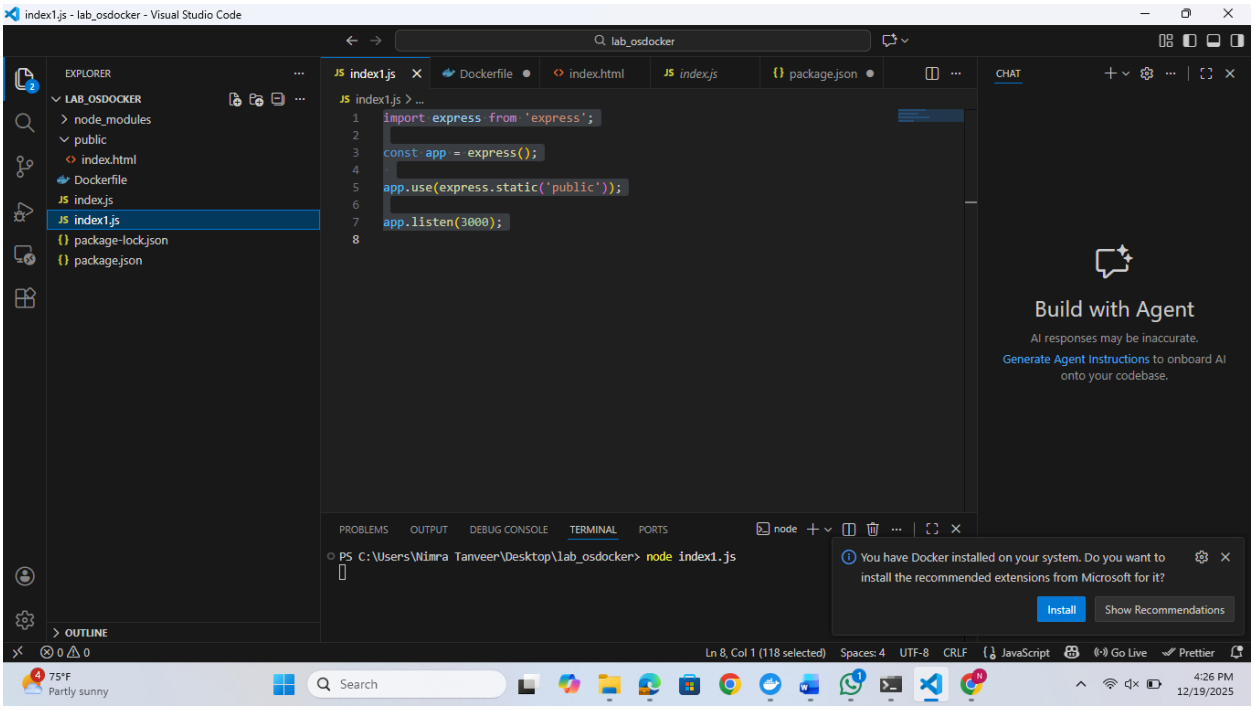
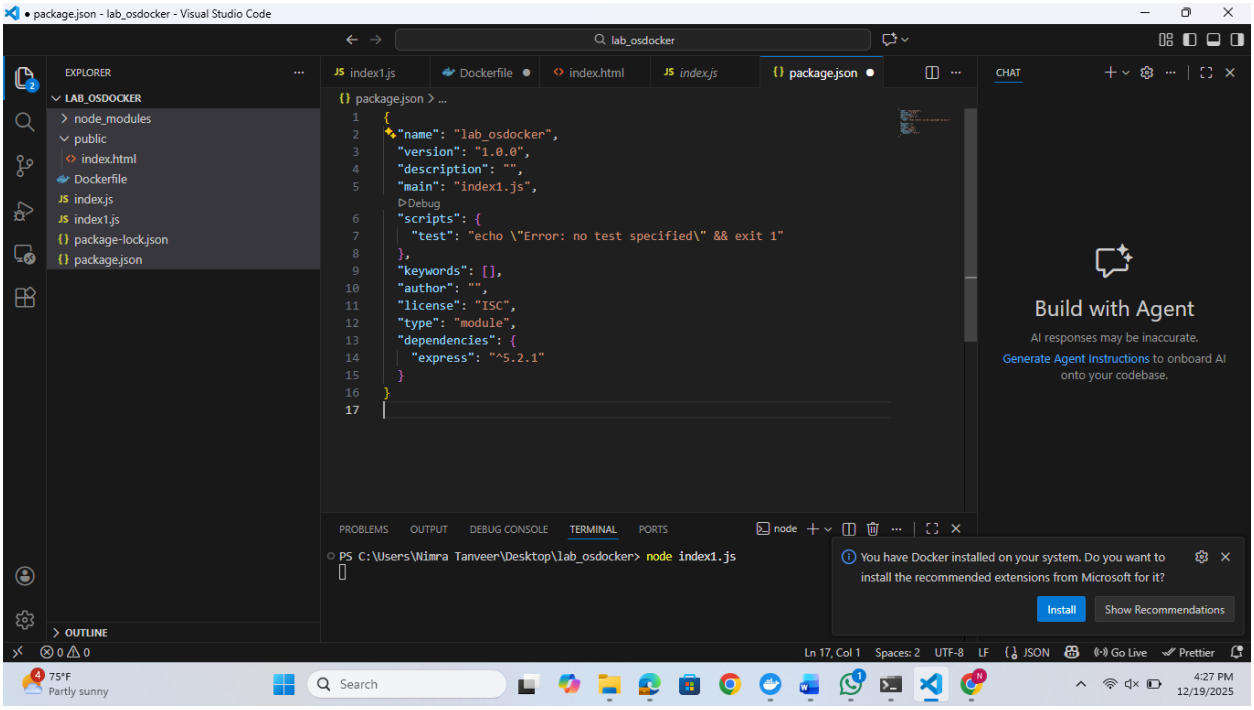
Index1.js



Package.js



Output: localhost:3000