



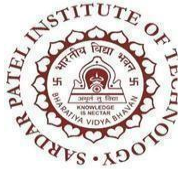
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Subject	CITL (Cloud and Internet Technology Lab)
Experiment No.	9
Aim	Use docker to run a multi-container web application

Implementation

```
Dockerfile X .dockerignore Header.tsx
Dockerfile > ...
You, yesterday | 1 author (You)
1 # Dockerfile
2 FROM node:18-alpine AS builder
3
4 WORKDIR /app
5 COPY package*.json ./
6 RUN npm install
7 COPY . . You, yesterday * project dockerize
8 RUN npm run build
9
10 FROM node:18-alpine AS runner
11 WORKDIR /app
12
13 ENV NODE_ENV production
14
15 COPY --from=builder /app/public ./public
16 COPY --from=builder /app/.next ./next
17 COPY --from=builder /app/node_modules ./node_modules
18 COPY --from=builder /app/package.json ./package.json
19
20 EXPOSE 3000
21
22 CMD ["npm", "start"]
23
```

```
docker-compose.yml
You, yesterday | 1 author (You)
1 version: '3'
2 services:
3   web:
4     build:
5       context: .
6     ports:
7       - "3000:3000"
8     volumes:
9       - ./app
10      - /app/node_modules
11      - /app/.next
12     environment:
13      - NODE_ENV=development You, yesterday * project dockerize
```



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```
16 COPY --from=builder /app/public /public
COPY --from=builder /app/next /next
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS SEARCH ERROR COMMENTS
-> [web internal] load metadata for docker.io/library/node:18-alpine
-> [web auth] library/node:pull token for registry-1.docker.io
-> [web internal] load .dockerignore
-> => transferring context: 128B
-> [web internal] load build context
-> => transferring context: 5.67kB
-> [web builder 1/6] FROM docker.io/library/node:18-alpine@sha256:02376a266c84acbf45bd19440e08e48b1c8b98037417334046029ab585de03e2
-> CACHED [web builder 2/6] WORKDIR /app
-> CACHED [web builder 3/6] COPY package*.json ./
-> CACHED [web builder 4/6] RUN npm install
-> CACHED [web builder 5/6] COPY . .
-> CACHED [web builder 6/6] RUN npm run build
-> CACHED [web runner 3/6] COPY --from=builder /app/public /public
-> CACHED [web runner 4/6] COPY --from=builder /app/next /next
-> CACHED [web runner 5/6] COPY --from=builder /app/node_modules /node_modules
-> CACHED [web runner 6/6] COPY --from=builder /app/package.json /package.json
-> [web] exporting to image
-> => exporting layers
-> => writing image sha256:369615a298f36c41f12ed5a3d9c5a77bfc563cd3477b76185972206ae4e9de42
-> => naming to docker.io/library/hotel-management-web
-> [web] resolving provenance for metadata file
[+] Running 2/2
✔ Network hotel-management_default Created
✔ Container hotel-management-web-1 Created
Attaching to web-1
web-1 | hotel-management@0.1.0 start
web-1 | > next start
web-1 |
web-1 | ⚠ You are using a non-standard "NODE_ENV" value in your environment. This creates inconsistencies in the project and is strongly advised against. Read more: https://nextjs.org/messages/non-standard-node-env
web-1 |   ▲ Next.js 14.2.14
web-1 |   - Local:      http://localhost:3000
web-1 |
web-1 | ✓ Starting...
web-1 | ✓ Ready in 1637ms
web-1 | [next-auth][warn][NEXTAUTH_URL]
web-1 | https://next-auth.js.org/warnings#nextauth_url
web-1 | ⚠ The "images.domains" configuration is deprecated. Please use "images.remotePatterns" configuration instead.
web-1 |
web-1 |
```

docker desktop PERSONAL

Search for images, containers, volumes, extensions

Containers

Images

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Builds

Docker Scout

Extensions

Containers [Give feedback](#)

Container CPU usage ⓘ
0.00% / 800% (8 CPUs available)

Container memory usage ⓘ
0B / 3.67GB

☐ Only show running containers

<input type="checkbox"/>	Name	Image	Status	Port(s)
<input type="checkbox"/>	> hotel-management		Running (1/1)	

Walkthroughs

Multi-container applications

Containers



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The top screenshot shows the Docker Desktop interface with the 'Containers' tab selected. It displays a table of running containers, including 'hotel-management'. The bottom screenshot shows the 'Terminal' view for the 'hotel-management' container, displaying the command 'next start' and the output of the application starting.

Name	Image	Status	Port(s)	CPU (%)	Last start...	Actions
hotel-management		Running (1/1)		0%	25 minutes ago	

```
2024-11-04 13:30:52 web-1 | 2024-11-04 13:30:52 web-1 | > hotel-management@0.1.0 start
2024-11-04 13:30:52 web-1 | 2024-11-04 13:30:52 web-1 | > next start
2024-11-04 13:30:52 web-1 | 2024-11-04 13:30:52 web-1 | 
2024-11-04 13:30:52 web-1 |   You are using a non-standard "NODE_ENV" value in your environment. This creates inco
n
sistencies in the project and is strongly advised against. Read more: https://nextjs.org/docs/messages/non-standard
-node-env
2024-11-04 13:30:53 web-1 |   ▲Next.js 14.2.14
2024-11-04 13:30:53 web-1 |   - Local:    http://localhost:3000
2024-11-04 13:30:53 web-1 |   ✓ Starting...
2024-11-04 13:30:54 web-1 |   ✓ Ready in 1637ms
2024-11-04 13:31:33 web-1 | [next-auth][warn][NEXTAUTH_URL]
2024-11-04 13:31:33 web-1 | https://next-auth.js.org/warnings#nextauth_url
2024-11-04 13:31:34 web-1 | ⚠The "images.domains" configuration is deprecated. Please use "images.remotePatterns"
configuration instead.
```

Conclusion

Hence by completing this experiment I got to know how to Use docker to run a multi-container web application