

Dockerignore

≡ Purpose → Prevents unwanted files / folders from being copied into the docker image (reduce size, avoid secrets).

Ex .dockerignore

node_modules

• git

• env

Dockerfile

Readme.md

Effect: Similar to gitignore, but the docker build content.

How API fetching works:-

≡ Your app (backend or frontend) writes a request
→ "Hey api, give me the data"
we use default →

≡ Python:- needs extra package (requests) → so in docker, you must install it.

≡ Nodejs:- (your main stack)

Already supports http requests in modern version → no extra install unless you want a different library.

different libraries like axios

• Case 1 :- You copy package.json

dockerfile

Copy package*.json. /

Run npm install

• Docker see "axios", "gsap", etc, in package.json

• Install all automatically

• No need to write RUN npm install axios.

• Case 2 :- You don't copy package.json

dockerfile

BAD practice

package.json is missing before npm install

RUN npm install axios gsap

• You must manually install everything because docker doesn't know your dependencies

• Not recommended :- breaks early and misses version control.

Communication Containers & Local DB

Problem! Inside the container, localhost means the container itself, not your host machine.

So if you write

```
mongoose.connect("mongodb://localhost:27017/mydb")
```

it won't find your local DB

Solution! = Use `host.docker.internal` or your host machine's IP address (Linux).

= Ex for Node.js

```
mongoose.connect("mongodb://host.docker.internal:27017/mydb");
```

= Make sure MongoDB is bound to 0.0.0.0 in its config to accept external connections

^{Ans} # If connecting to Atlas → no change, works like normal because it's a cloud connection.

* Container \longleftrightarrow Container Communication

1. Docker Network:

- Containers on the same network can reach each other using their service / container names.
- No need to expose ports to the host unless you want host access.

2. Backend \leftrightarrow Database Container

- Connect using the DB container name in the connecting string.
- Example (mongodb)

```
mongoose.connect("mongodb://mongo:27017/mydb")
```

3. Frontend \leftrightarrow Backend Container

- Inside the same network (eg, Docker, Compose), frontend can fetch API using backend's service name.

```
fetch("http://backend:5000/api/posts")
```