Day 2 – How to Dockerize a Project

1. How to Dockerize a Project?

Ans) To Dockerize a project, you containerize the app so it can run reliably in any environment. Here's a step-by-step guide that works for most projects:

✅ 1. Set Up Your Project Structure

Example: a simple Node.js project

```go
my-app/
├── app.js
├── package.json
└── Dockerfile
```

✅ 2. Create a Dockerfile

The Dockerfile defines how your app is built inside a container. For a Node.js project:

```
# Use a base image
FROM node:18-alpine

# Set the working directory
WORKDIR /usr/src/app

# Copy package.json and install dependencies
COPY package*.json ./
RUN npm install

# Copy the rest of the app
COPY . .

# Expose the port
EXPOSE 3000

# Command to run the app
CMD ["node", "app.js"]
```

For Python, Java, Go, etc., change the base image and run commands accordingly.

✅ 3. Add a .dockerignore File

This prevents unnecessary files from being copied into the image.

```dockerignore
node_modules
*.log
.env
```

✅ 4. Build the Docker Image

Run this in the terminal from the project root:

Command: docker build -t my-app .

✅ 5. Run the Docker Container

Command: docker run -d -p 3000:3000 my-app