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1 Project Structure

frontend/

├── Dockerfile

├── package.json

├── package-lock.json

└── src/

2 Multi-Stage Dockerfile

----- Stage 1: Build React app -----

FROM node:18-alpine AS builder

Set working directory

WORKDIR /app

Copy dependencies first (for better caching)

COPY package*.json ./

Install dependencies

RUN npm ci

Copy rest of the source code

COPY . .

Build the app for production

RUN npm run build

----- Stage 2: Serve with Nginx -----

FROM nginx:alpine

Remove default nginx website

RUN rm -rf /usr/share/nginx/html/*

Copy build files from the builder stage

COPY --from=builder /app/build /usr/share/nginx/html

Expose port 80

EXPOSE 80

Start nginx

CMD ["nginx", "-g", "daemon off;"]

Build & Run Commands

Build the image

```
docker build -t react-app-prod .
```

Run the container

```
docker run -d -p 80:80 react-app-prod
```

Output in Image Form :

