



UNIVERSITY INSTITUTE OF ENGINEERING

Full Stack Project

PulseChat – Real Time Messaging & Collaboration System

Subject Code – 23CSP-339

Submitted To:

**Faculty Name: Er. Juned Alam
(E18479)**

Submitted By:

**Name: Suhan Kumar Singh
UID: 23BCS13955
Section: KRG - 2B
Semester: 5th**



Module 5 — Dockerize, CI/CD, deployment, docs, presentation

Goal: production-ish deployment + deliverables for submission (README, demo video, screenshots).

What to do

1. Docker & compose

- Backend Dockerfile, Frontend Dockerfile. Compose file includes backend, frontend, and MongoDB for local dev.
- docker-compose up to run full stack.

2. CI/CD

- GitHub Actions: build & test backend, build frontend, push Docker images (optional) or deploy to Render/Railway.
- Setup deploy to Render/Railway/AWS (Render is easiest for student projects).

3. Final testing & polish

- Cross-browser check, mobile responsive tweaks (Tailwind utilities).
- Add environment config for prod (CORS, allowed origins, secure cookies if used).

4. Documentation & deliverables

- README: setup steps, env vars, endpoints list, architecture diagram (1 image).
- Create a 3–4 minute demo video: show register/login, 1:1 chat, group, file upload, admin.
- Prepare a short slide deck (5–8 slides): problem, architecture, demo screenshots, features, future improvements.

Deliverables

- docker-compose.yml, GitHub Actions workflow file, deployed URL, README, demo video, slides.

Acceptance criteria

- App runs via Docker locally.
- Deployed URL reachable and supports register/login + chat.