1.

Why having the CI/CD is important (5 pts)

CI/CD ensures that all changes are tested before deployment, broken code doesn't reach production, and deployment is faster and more consistent. It also allowed our team to collaborate better without errors

2.

[Reflection] What you have learned from doing that project – both part of software engineering and NOT software engineering, such as security, networks, accessibility, etc (10 pts). Just the topic names and briefly 1-2 sentences explaining how.

React and Node.js integration: Learned how frontend communicates with backend through API calls
Microservices architecture: Understanding how the Auth Service, client service, and LLM interface interact
Automated testing: Learned to run end to end and Unit tests for both frontend and backend.
SQLite database management:
Security: Learned how to store API keys safely using environment variables
Networks: Learned basic API endpoints and HTTP request/response flow
Accessibility: Learned to make UI usable with voice input and output

3.

[Reflection] What problems you faced when deploying your project (5 pts)

Vercel did not detect the frontend as a root directory because of incorrect repo structure.
Github did not recognize me (Brady) as an admin so I was not able to attach it to Vercel.
Environment variables needed proper configuration for backend endpoints and LLM API keys.
Updating all the microservices for deployment
Setting up all the servers on render and getting the secret keys
Work flow was not testing correctly
LLM OLLAMA runs locally and does not work with render