ClassSphere: Smart Room Scheduling

Web Architecture Mapping

01 DNS

Resolves ClassroomScheduling.online to IP address

02 USER BROWSER

Student/Professor opens the system in their browser

03 CDN

Delivers static assets (CSS, JS, Images) quickly

04 CACHING SERVICE

Catches frequently accessed data for faster response

05 Web Application Servers

Handles application logic, authentication, schedules, rooms, users, notifications, etc.

06 LOAD BALANCER

Distributes incoming request across multiple servers

07 DATABASE

Stores core data:

- Users
- Schedules
- Rooms
- Subjects
- Professor

08 FILE STORAGE

Stores uploaded files (syllabus, attachments, profile pictures, etc.

09 NOTIFICATIONS SERVICES

Sends emails/ in-app notification for announcements and updates

10 LOGGING & MONITORING

Track system logs, errors, performance, and user activities

USER BROWSER

Handles scheduled tasks (reports, reminders, data updates, etc.)

USER BROWSER

Enables fast search for schedules, rooms, users, and subjects

USER BROWSER

Processes heavy tasks asynchronously from the queue