Architecture Design Code-X learner

Team Git Guardians

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Tech Stack

1. Frontend: React.js

React.js is a popular choice for building dynamic and responsive user interfaces. It offers a component-based architecture, which is ideal for creating the frontend of a complex application like an e-learning platform. React's virtual DOM enables efficient updates, and its large community provides a wealth of reusable components.

2. Backend: Node.js with Express.js

-Justification: Node.js is a suitable choice for building the backend. Express.js is a lightweight web framework for Node.js that simplifies routing, middleware management, and handling HTTP requests, making it well-suited for building RESTful APIs.

3. Database: PostgreSQL

PostgreSQL is a robust, open-source relational database management system. It provides excellent support for complex queries, which can be important for managing e-learning content, user data, and course information.

6. Video Hosting: Embedded YouTube Videos

Embedding YouTube videos is a cost-effective and user-friendly way to handle video content. It offloads video storage and streaming to YouTube, which is a reliable platform for hosting and serving videos.

7. Cloud Storage: Amazon S3 (for other content)

-For non-video content like documents, images, and resources, Amazon S3 can be used for secure and scalable cloud storage. It allows you to store and serve these files efficiently.

A diagram of a web server

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A diagram of a flowchart

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Description automatically generatedA diagram of a company

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admin dashboard

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Sequence diagram for e-learning platform

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