

Content Management System (CMS)

Abstract:

The Content Manager project is a robust content management system focused on modularity, API-driven architecture, and user-centric design. It employs a modular structure that separates functionalities into distinct components, including APIs, shared utilities, and a frontend, enhancing maintainability and scalability. Central to the project is a RESTful API, which enables seamless communication between the frontend and backend, facilitating efficient content management operations. The front end is built using modern technologies like Vue.js and TypeScript, ensuring a responsive and interactive user experience. Additionally, the system features key-based access control, allowing administrators to set time-bound access to specific content, thereby enhancing security for sensitive information. This combination of modular design, API integration, modern frontend technologies, and robust security measures makes Content Manager an effective solution for managing digital content efficiently and securely, catering to the diverse needs of organizations in today's digital landscape.

Software Requirements:

1. Operating System:

- Windows, Linux, or macOS (any modern version).

2. Development Tools:

- **Java Development Kit (JDK)**: Version 8 or higher.
- **Gradle**: For build automation.
- **Maven**: (if used) for managing project dependencies.
- **Node.js**: For frontend development using Vue.js and TypeScript.

3. Frontend Technologies:

- **Vue.js**: JavaScript framework for the frontend.
- **TypeScript**: For enhanced type checking and scalability of frontend code.

4. Backend Technologies:

- **Spring Boot (Optional)**: To create and deploy RESTful APIs (if applicable).
- **MySQL/PostgreSQL**: For the content database.
- **Redis**: (Optional) For caching if needed for performance optimization.

5. Web Server:

- **Apache Tomcat** or any other Java-based server to deploy the application.

6. Version Control:

- **Git**: For version control and collaboration.

Hardware Requirements:

1. Processor:

- Minimum: Dual-core processor (2.5 GHz or faster).
- Recommended: Quad-core processor for smoother development and testing.

2. Memory (RAM):

- Minimum: 4 GB RAM.
- Recommended: 8 GB or more for running the development environment, database, and web server concurrently.

3. Storage:

- Minimum: 10 GB of available disk space for project files, dependencies, and development tools.
- Recommended: 20 GB or more for storing additional libraries, databases, and backups.

4. Display:

- Minimum: 1280x720 resolution.
- Recommended: 1920x1080 resolution for better workspace management while developing.

5. Network:

- Reliable internet connection for downloading dependencies, version control with Git, and online resources.

Team Members:

Team Size: 5

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