**Project Proposal: Crypto Knowledge Hub (CKH)**

**Description of the Content Management Site**

**Business Name: Crypto Knowledge Hub (CKH)**

**Business Description:**

Crypto Knowledge Hub is an online platform that serves as a comprehensive repository of cryptocurrency and blockchain-related content. The website caters to crypto enthusiasts, developers, and investors by offering a range of content such as articles, cryptocurrency profiles, market analysis, and educational resources about blockchain technology. CKH aims to be a go-to resource for those seeking to stay informed about the rapidly evolving crypto industry.

**Why CKH Needs a CMS:**

CKH requires a content management system (CMS) to efficiently manage its growing repository of crypto-related content, including daily market trends, articles, and educational resources. The CMS will allow administrators to easily add, edit, and manage content without needing technical web development skills. It will enable CKH to remain agile by ensuring up-to-date content is readily available while reducing the need for developers to make manual changes. Cryptocurrency profiles and market data will be fetched dynamically from external APIs and displayed on a dedicated page.

**Users and Their Roles:**

1. **Administrator**:
   * Role: Full access to manage the content, users, and settings of the platform.
   * Responsibilities: Add, update, delete and publish articles.
2. **Content Contributor**:
   * Role: Limited access to add or edit articles and crypto data but cannot publish.
   * Responsibilities: Write content about crypto topics and submit for review by administrators.
3. **Visitor/User**:
   * Role: General site visitor with access to view content.
   * Responsibilities: View articles, browse cryptocurrency profiles, and read educational resources. No edit access.

**Database Structure Description**

The CMS database structure focuses on managing users, content, and article comments, while cryptocurrency data is fetched live from external APIs and displayed dynamically. Below is an overview of the tables that will be part of the system.

**Tables Overview**

**1. Users Table**

Description: Stores user information for login and role management.  
Fields:

* user\_id (int, PK): Unique identifier for each user.
* first\_name (varchar): First name of the user.
* last\_name (varchar): Last name of the user.
* password (varchar): Password (hashed) for authentication.
* role (varchar): Role of the user (Admin, Contributor, Visitor).

**2. Articles Table**

Description: Stores the articles and educational resources published on the platform.  
Fields:

* article\_id (int, PK): Unique identifier for each article.
* title (varchar): Title of the article.
* content (text): Body of the article.
* author\_id (int, FK): Links to the user who authored the article.
* published\_date (date): Date the article was published.
* crypto\_name(varchar): Associate crypto name.

**3. Comments Table**

Description: Stores comments made by users on articles.  
Fields:

* comment\_id (int, PK): Unique identifier for each comment.
* article\_id (int, FK): Links to the article the comment is associated with.
* author\_id (int, FK): Links to the user who made the comment.
* content (text): Body of the comment.
* comment\_date (datetime): Date and time the comment was made.

Entity Relationship Diagram (ERD)

### **A screenshot of a computer Description automatically generated**

**CryptoData Page (Dynamically Fetched)**

**Description**: This page will not have a database table, as it will dynamically display cryptocurrency market data fetched from external APIs. Information such as prices, volume, and market cap will be updated in real-time and displayed on this page.

**Displayed Fields** (fetched from the API):

* Cryptocurrency name (e.g., Bitcoin, Ethereum)
* Symbol (e.g., BTC, ETH)
* Current price
* 24-hour trading volume
* Market capitalization

### **Conclusion**:

The Crypto Knowledge Hub (CKH) CMS is designed to effectively manage user-generated content, such as articles and comments, while seamlessly integrating dynamic cryptocurrency data through external API calls. This approach allows administrators and contributors to focus on creating and managing valuable content without the need to handle constantly changing cryptocurrency market data. By fetching live data directly from APIs, CKH ensures that users always have access to accurate and up-to-date cryptocurrency information without the overhead of maintaining it within the database. This setup keeps the platform agile, scalable, and efficient in delivering both static and dynamic content.