

# Content Management System

## Team Members :

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## Project Description:

The Content Management System (CMS) is a web application that allows users to create, manage, and publish digital content, such as articles, blog posts, and multimedia. This project aims to develop a CMS using Node.js, Express, EJS, and MongoDB, providing a flexible and efficient platform for content creation and management. The CMS developed using Node.js, Express, and MongoDB offers a comprehensive solution for content creation and management, with a focus on user experience, performance, and scalability.

## Technologies Used:

- **Frontend:** CSS, JavaScript
- **Backend:** NodeJS, ExpressJS
- **Database:** MongoDB

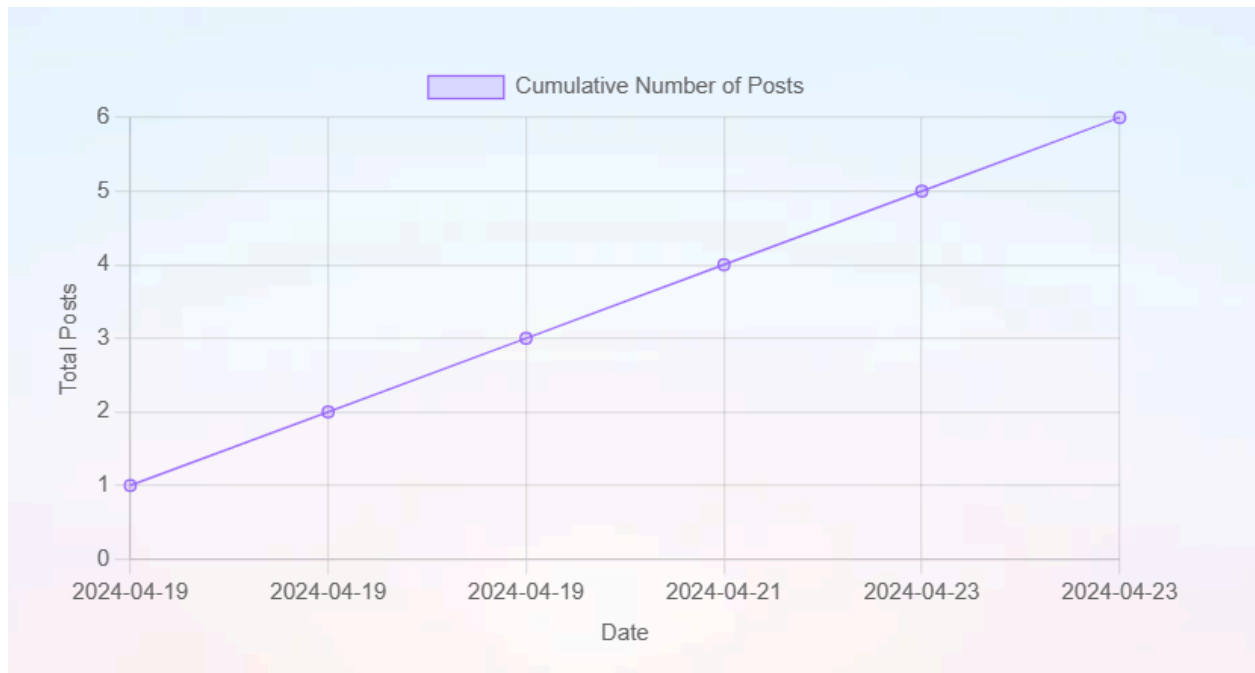
## Collections:

- **Users:**  
\_id, username, password
- **Posts :**  
\_id, title, body, createdAt, updatedAt
- **Sessions:**  
\_id, session, expires
- **Comments:**  
\_id, postId, userId, text, createdAt, updatedAt
- **Favorites:**  
\_id, postID, userID, createdAt
- **Tags:**  
\_id, postId, name

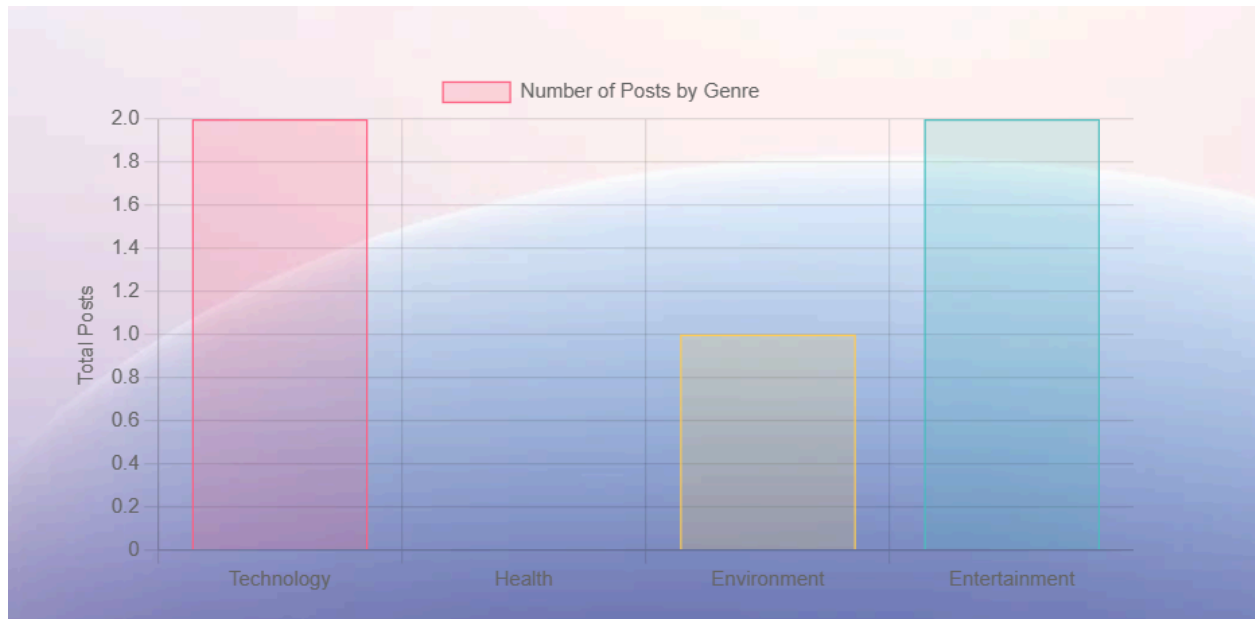
## Operations:

Perform basic CRUD (Create, Read, Update, and Delete) operations.

## Visualizations:



Visualization showing Date wise cumulative Number of Posts added with the help of Line chart.



Visualization showing Number of total posts by Genre with the help of Bar Chart.

### Functionalities:

- **Responsive Design:** The application is built with a responsive design, meaning it adjusts to different screen sizes, providing a user-friendly experience on both desktops and mobile devices.
- **CRUD Operations:** The application supports Create, Read, Update, and Delete operations for blog posts. Users can add new posts, view them on the blog, edit existing posts, or delete them.
- **Database Integration:** It uses MongoDB for data storage, which includes storing the details of blog posts.
- **User Authentication:** The application includes functionality for user authentication. Users can sign up, log in, and log out.
- **Title Generator Using Machine Learning:** When adding content to a blog post, the application includes an innovative title generator that utilizes a machine learning method utilizing NLP and Hugging Face. This feature automatically generates a relatable and engaging title based on the content provided, enhancing the user experience and making the blog posts more appealing.
- **Middleware for Session Handling:** It uses middleware to manage sessions, ensuring that users remain logged in as they navigate through different parts of the blog.
- **Environment Variables:** It uses an .env file to securely manage environment variables like MongoDB URI and JWT secrets.

- **Layout and Design:** The front-end uses EJS templates for rendering pages. It also includes a link to the Figma design files used for the blog's layout.
- **Development Tools:** For local development, the project utilizes Nodemon to automatically restart the server when files change.
- **Security Features:** The application handles security through JSON Web Tokens (JWT) and secure handling of database credentials.

## **Complex Query:**

**Pagination of Posts:** It fetches a paginated list of all blog posts, sorted by their creation date in descending order. The pagination is controlled by a page query parameter, defaulting to the first page with 10 posts per page.

**Top Commented Posts:** It constructs an aggregation pipeline to identify the top three most commented posts. This involves:

Joining the posts collection with the comments collection to map comments to their respective posts.

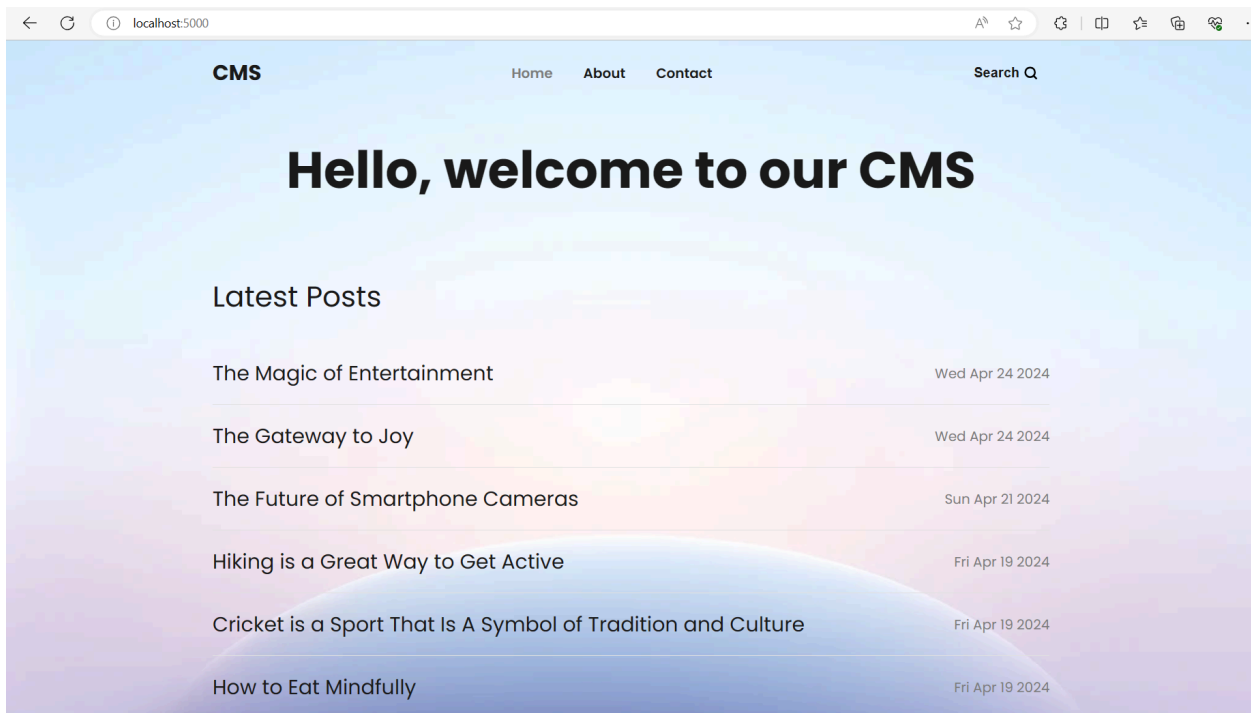
Calculating the number of comments for each post.

Sorting these posts by the count of comments in descending order.

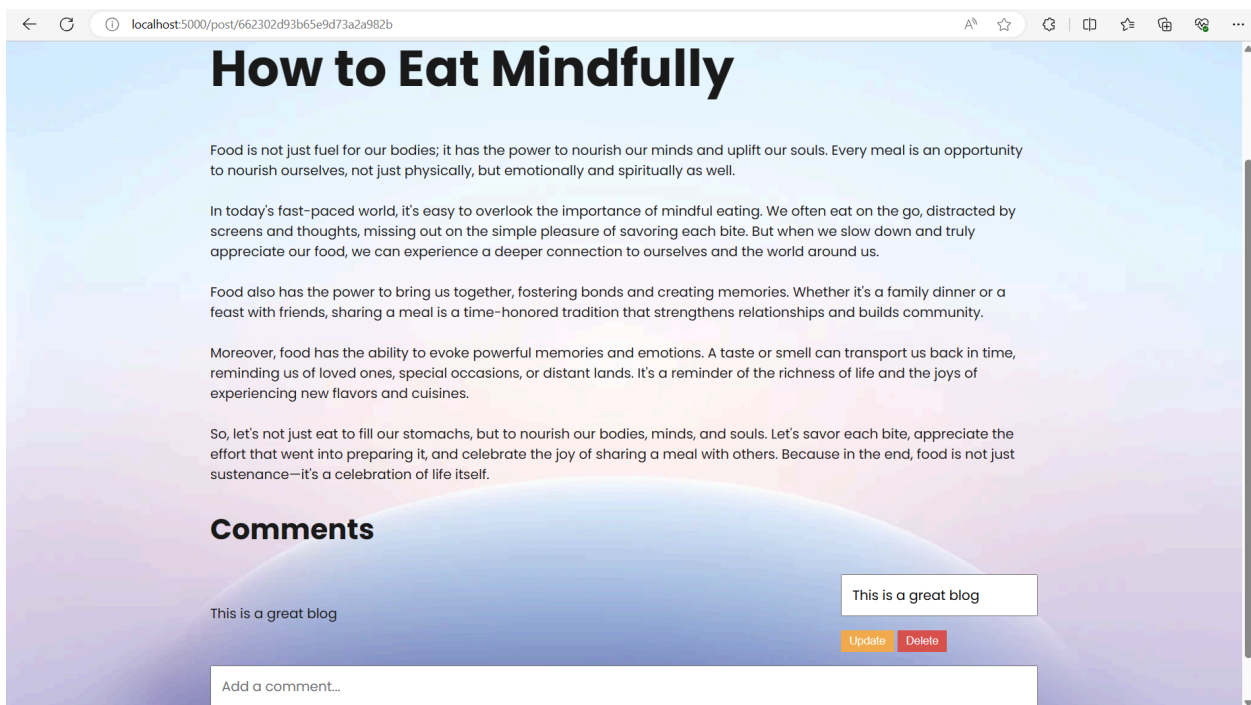
Limiting the output to only the top three posts.

# Screenshots of the UI:

## Home Page:



## Comment & Post:



## List of Users, Posts and Favorite Posts:

**Admin Panel**[Home](#)[About](#)[Contact](#)[Logout](#)

### Users List

sid	<a href="#">Delete</a>
Gandhar	<a href="#">Delete</a>

### Favorited Posts

[How to Eat Mindfully ↗](#)[Edit](#)[Delete](#)[Unfavorite](#)

[Hiking is a Great Way to Get Active ↗](#)[Edit](#)[Delete](#)[Unfavorite](#)

### All Posts

[Cricket is a Sport That is A Symbol of Tradition and Culture ↗](#)[Edit](#)[Delete](#)

[The Future of Smartphone Cameras ↗](#)[Edit](#)[Delete](#)

[+ Add New](#)

## Post, Favorites and Tags:

[Sign in](#)

[\(12668\) Kenya Grace - Str...](#)

[Data | Cloud: MongoDB Cloud](#)

[740\\_FinalProject - Google Docs](#)

[How to Eat Mindfully](#)

[\(163\) WhatsApp](#)

localhost:5000/post/662302d93b65e9d73a2a982b

# How to Eat Mindfully

Food is not just fuel for our bodies; it has the power to nourish our minds and uplift our souls. Every meal is an opportunity to nourish ourselves, not just physically, but emotionally and spiritually as well.

In today's fast-paced world, it's easy to overlook the importance of mindful eating. We often eat on the go, distracted by screens and thoughts, missing out on the simple pleasure of savoring each bite. But when we slow down and truly appreciate our food, we can experience a deeper connection to ourselves and the world around us.

Food also has the power to bring us together, fostering bonds and creating memories. Whether it's a family dinner or a feast with friends, sharing a meal is a time-honored tradition that strengthens relationships and builds community.

Moreover, food has the ability to evoke powerful memories and emotions. A taste or smell can transport us back in time, reminding us of loved ones, special occasions, or distant lands. It's a reminder of the richness of life and the joys of experiencing new flavors and cuisines.

So, let's not just eat to fill our stomachs, but to nourish our bodies, minds, and souls. Let's savor each bite, appreciate the effort that went into preparing it, and celebrate the joy of sharing a meal with others. Because in the end, food is not just sustenance—it's a celebration of life itself.

[Favorite](#)

### Tags

• healthy

[Delete](#)

Enter tag name...

## View / Edit Post:

Admin Panel

[Home](#) [About](#) [Contact](#) [Logout](#)

[← Back](#)

View / Edit Post

Delete

Title

How to Eat Mindfully

Content

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Update

## Search Bar:

Close

### Top 3 Commented Post:

**CMS**[Home](#)[About](#)[Contact](#)[Search Q](#)

# Hello, welcome to our CMS

## Top 3 Commented Posts

Cricket is a Sport That Is A Symbol of Tradition and Culture	Fri Apr 19 2024
The Magic of Entertainment	Wed Apr 24 2024
How to Eat Mindfully	Fri Apr 19 2024



# Data Base

## MongoDB:

```
JS app.js > ...
154 // Use middleware to handle form data and JSON data
155 app.use(express.urlencoded({ extended: true }));
156 app.use(express.json());
157
158 // Use middleware for cookies and HTTP methods
159 app.use(cookieParser());
160 app.use(methodOverride('_method'));
161
162 // MongoDB URL from environment variables
163 const mongoUrl = 'mongodb+srv://sawantsiddhesh2:a8uRpg5Cz8LiuxRa@cluster0.6t6jx52.mongodb.net/';
164
165 // Configure session with MongoDB Store
166 app.use(session({
167   secret: 'keyboard cat',
168   resave: false,
169   saveUninitialized: true,
170   store: MongoStore.create({
171     mongoUrl: mongoUrl,
172   }),
173 }));
174
175 // Serve static files
176 app.use(express.static('public'));
177
178 // Configure templating engine
179 app.use(expressLayouts);
```

Atlas

sawant's Or...

Access Manager

Billing

All Clusters

Get Help

sawant

Project 0

Data Services

App Services

Charts

Overview

DEPLOYMENT

Database

Data Lake

SERVICES

Device Sync

Triggers

Data API

Data Federation

Atlas Search

Stream Processing

Migration

SECURITY

Backup

Database Access

Search Namespaces

sample\_analytics

sample\_geospatial

sample\_guides

sample\_mflix

sample\_restaurants

sample\_supplies

sample\_training

test

comments

favorites

posts

sessions

tags

users

LOGICAL DATA SIZE: 14KB

STORAGE SIZE: 228KB

INDEX SIZE: 324KB

TOTAL COLLECTIONS: 6

CREATE COLLECTION

Collection Name	Documents	Logical Data Size	Avg Document Size	Storage Size	Indexes	Index Size	Avg Index Size
comments	4	540B	135B	36KB	1	36KB	36KB
favorites	2	180B	90B	36KB	1	36KB	36KB
posts	6	12.37KB	2.06KB	48KB	1	36KB	36KB
sessions	4	616B	154B	36KB	2	72KB	36KB
tags	1	88B	88B	36KB	2	72KB	36KB
users	2	252B	126B	36KB	2	72KB	36KB

## Machine learning:

```
const axios = require('axios');

router.post('/add-post', authMiddleware, async (req, res) => {
  try {
    if (!req.body.title && req.body.body) {

      const apiUrl = 'https://api-inference.huggingface.co/models/fabiochiu/t5-base-medium-title-generation';

      const headers = [
        'Authorization': `Bearer hf_FhltB3zqEmJlMedwynfkYzecKqvgiTQguR`
      ];

      const data = {
        inputs: `Generate an appropriate title based on the following content: ${req.body.body}`,
        parameters: { max_length: 200},

        options: { use_cache: false, wait_for_model: true }
      };

      const response = await axios.post(apiUrl, data, { headers: headers });
      console.log('Generated title:', response.data);

      req.body.title = response.data[0].generated_text;
    }

    const newPost = new Post({
      title: req.body.title,
      body: req.body.body
    });

    await newPost.save();
    res.status(201).send({ message: 'Post added successfully!', post: newPost });
  } catch (error) {
    console.error('Failed to add post:', error);
    res.status(500).send({ message: 'Failed to add post' });
  }
});
```

- For the machine learning method, we utilized Natural Language Processing (NLP) techniques in conjunction with the Hugging Face (<https://huggingface.co/>) library.
- This allowed us to implement a title generator feature that automatically generates engaging titles for blog posts.
- When a user adds a new post, the NLP model analyzes the content and generates a suitable title based on the post's content.
- The Hugging Face library provides access to pre-trained models and facilitates the implementation of advanced NLP tasks, enhancing the accuracy and effectiveness of the title generation process.

## Team member accomplishments:

- We were able to create a web application with the use of a NoSQL database i.e MongoDB and additional technologies like ExpressJS, ReactJS, and NodeJS.
- Gandhar contributed to the backend development using NodeJS and ExpressJS, integrating MongoDB for the database, and implementing a machine learning method for the title generator utilizing NLP and Hugging Face. Siddhesh focused on frontend development, working with HTML, CSS, JavaScript, and creating visualizations.