

# Social Media Application Using Mern Stack

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**Abstract:** A social network is an online platform that people use to build social networks and relationships with people who share similar interests, backgrounds, or real-life connections with others from all walks of life. Whilst they were originally intended for people to build connections with others, they are also powerful marketing tools. Users can share ideas, photos, videos, posts, and inform each other about online or real-world activities with people in their network. Essential features of a social network include an activity feed which displays all of the latest updates from friends or groups, a messaging service to directly communicate with specific users, a profile for people to list personal information such as their name, age, or profession for example and is usually accompanied by photos, videos, and summaries of their most recent life updates or interest. With hundreds of social media sites globally, these platforms offer users the ability to access information in real time, to connect, and find niche communities. It has helped many individuals find common ground with others online, making the world seem more accessible and interconnected.

**Keywords**—MongoDB, Express.js, React.js, Node.js, social network, MERN

## I. INTRODUCTION

Social media started as a way to interact with friends and family, but soon expanded to serve many purposes. Social media facilitates sharing of content, multimedia, information, and communities on virtual networks. More than 4.7 billion people use social media, equal to about 60% of the world's population. Today, social media messaging apps and platforms are the most widely used sites.

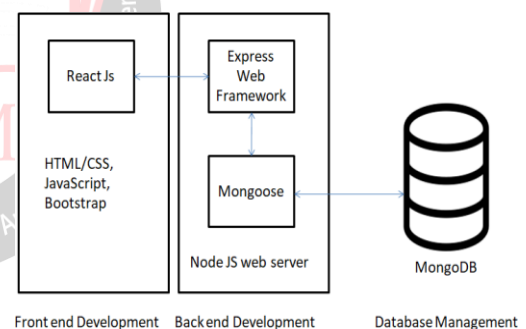
### PURPOSE:

Social media allows individuals to keep in touch with friends and extended family. Some people will use various social media applications to network and find career opportunities, connect with people across the globe with like-minded interests, and share their own thoughts, personal updates, and insights online.

## II. METHODOLOGY

MERN is MongoDB, Express.js, React.js, and Node.js. Express.js is a web server framework (together with Node.js); React.js is a web purchaser library, and Node.js as server-side platform to MongoDB as a database. MERN combines four cutting-edge technologies in today's development, from front-end to back-end. It saves effort and time for builders to grasp new technology for utility improvement. The stack is supported by a large number of open-source packages and a committed community enabling programmers to boost scalability and maintain software products, thanks to the same JavaScript platform

The basis of the MERN stack is Node.js, a server-side technology that provides very excessive overall performance and rapid reaction to all duties, such as huge and complicated data. MERN doesn't need Typescript; all it needs is the flexible basis of React, today's most popular and important front-end technology



### A. MERN stack components

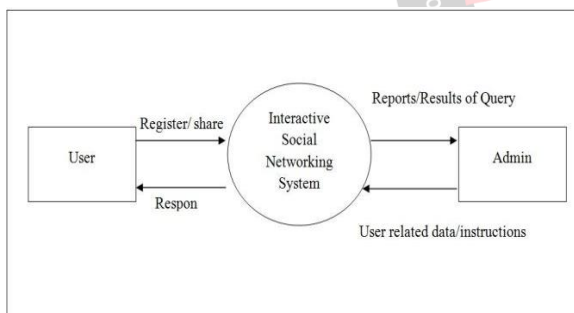
- There are four components of the MERN stack. Let's discuss each of them one by one.
- The first component is MongoDB, which is a NoSQL database management system.
- The second MERN stack component is ExpressJS. It is a backend web application framework for NodeJS.
- The third component is ReactJS, a JavaScript library for developing UIs based on UI components.
- The final component of the MERN stack is NodeJS. It is a JS runtime environment, i.e., it enables running JavaScript code outside the browser [1]

## B. Module description

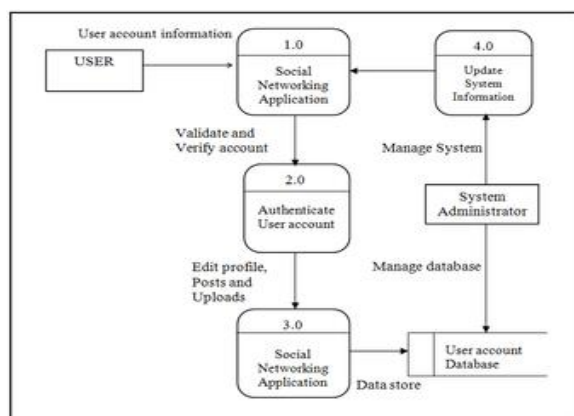
- **1.Registration:** Users can create a new account, either through email id or using existing social media accounts in platforms like Google or Facebook.
- **2. Profile creation:** Users can create a personal profile, including information about themselves and can manage and edit their profile as per their wish.
- **3. Post Creation and Interaction:** Users can publish posts with different content, such as text, photos or video. They can also interact with others' posts through likes and comments.
- **4. Feed:** Users should be able to stay tuned with all the information regarding their friends and communities through a central space called Feed.
- **5. Notifications:** Users can get notifications about new events such as likes, comments, messages, follows, etc.
- **6. Search:** Enable users to find people, groups, or topics by implementing search for different criteria such as username, tag, location.
- **7. Admin Access:** To manage the site, carry out administrative functions, and to manage reported users, this feature is essential.

## C. Flow diagram

### Level 0:



### Level 1:



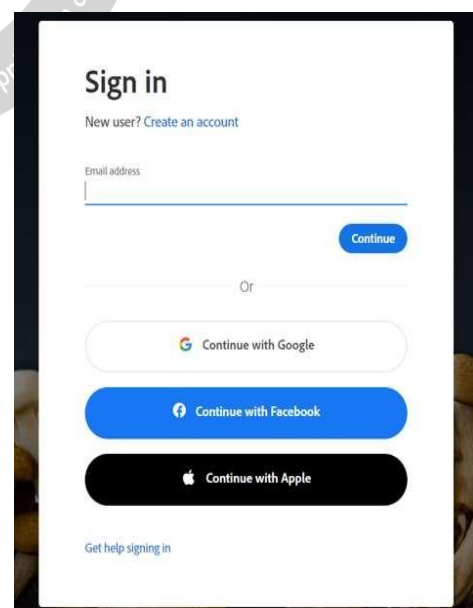
## D. features

- Create, read, update and delete posts
- Like and unlike posts
- Create, reply to, read, update and delete nested comments
- Markdown for posts and comments
- Sign up and login using JWT for authentication
- Private message users in real-time using socket.io
- View profiles of users and browse through their posts, liked posts and comments
- Infinite scrolling
- Sort posts by attributes such as like count, comment count and date created
- Profanity filtering and posting/commenting cooldowns
- Update bio which can be viewed by other users
- Search for posts by their title.
- Fully responsive layout.

## III. RESULT

We implement the MERN stack in this paper and describe its characteristics to develop an end-to-end social networking web application. This paper examines each technology's background ideas, principles, and important techniques. Additionally, these technologies are discussed along with how they can be used to create a coupled backend and frontend application powered by a NoSQL database. The uniqueness of my application is admin module here I tried to represent the admin view of the registered users. The admin can perform a lot of queries on the registered users.

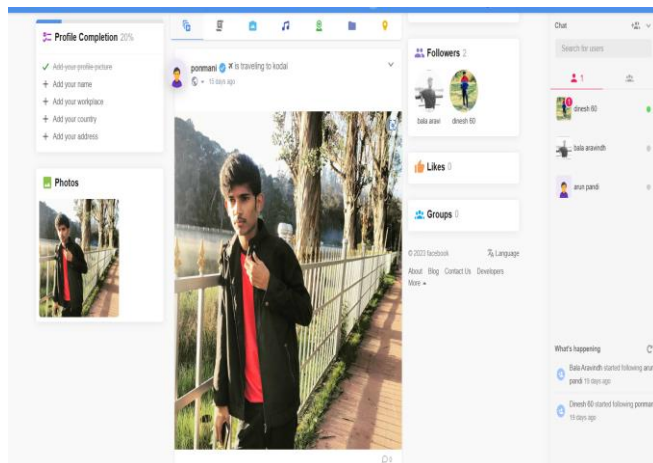
### A. Register page



A register page for registration of users and a login for who already registered.

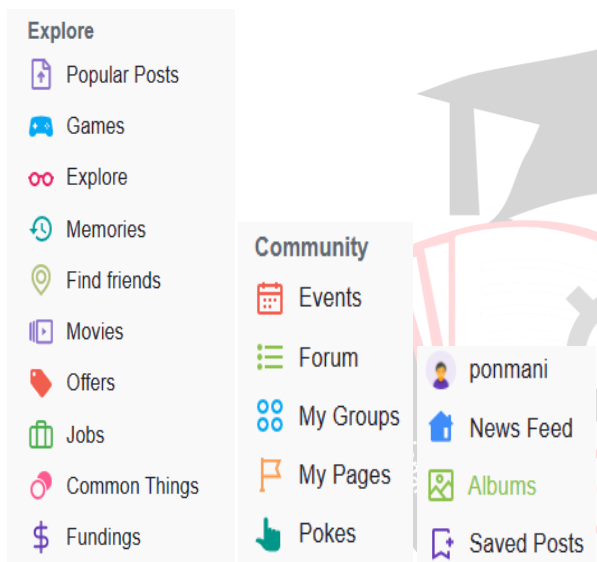
### B. Profile page:

contains information about that user

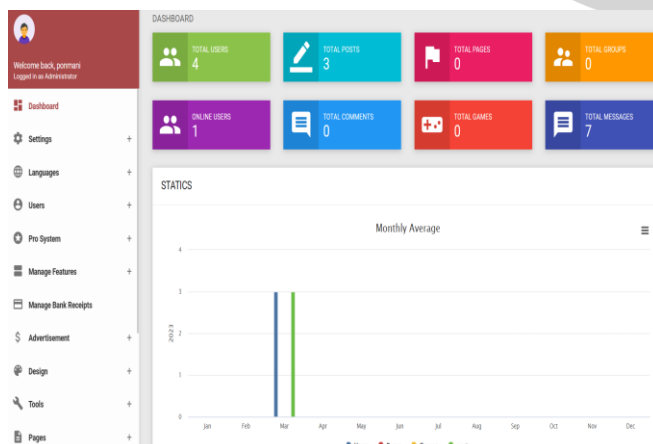


### C. Buttons:

Buttons to access into extra features



### D. Admin arena: Admin arena for admin controls



## IV. CONCLUSION AND SCOPE

This paper consists of the implementation of the MERN stack and its traits on the way to increase an stop-to-cess social networking internet software. The social application

creates means of interactions among people in which they create, share, and/or exchange information and ideas in virtual communities and networks.[6]

Social networking truly portrays both wonderful and terrible effects on us. It's miles the decision of an individual to decide what to take from them. Hence, it can be stated that social media is a blessing to humanity if used accurately and also a weapon of destruction if misrepresented.

The research work investigated and identified the relevant additional requirements that can be catered for in the design and development of an online forum.

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