**Social Media Clone using MERN Stack**

Report submitted in partial fulfillment of the requirement for

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B.Tech In

Computer Science and Engineering

Under the Supervision of

**Mr. Tarun Aggarwal**

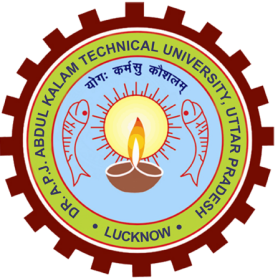
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**DECLARATION**

This is to certify that Synopsis Report Entitled “**Social Media Clone using MERN Stack**” which is submitted in partial fulfillment of the requirement for the award of degree B.Tech. in Computer Science and Engineering to R.K.G.I.T, Ghaziabad, Dr. A.P.J. Abdul Kalam Technical University, Lucknow comprises only original work and studies carried out by students himself. The matter embodied in this synopsis has not been submitted for the award of any other degree.

Date:

Approved By :

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**ABSTRACT**

Social networking is one of the most popular internet activities, with millions of users from around the world. The time spent on sites like Facebook or Twitter is constantly increasing at an impressive rate. At the same time, the organizations managing these social media sites introduce new features and functionalities over time. This often leads to the site getting cluttered with buttons and information that is designed to keep the user engaged for as long as possible.

The users trying to look for a platform to do the bare minimum of sharing pictures and photos are left with websites with information overdose. The purpose of this project is to develop and deploy a user friendly web application using the latest technologies and trends and to bridge the gap among the people living across the globe on a social platform that is easy to use, but packed with additional functionalities if the end-user wants them.

The proposed web based application serves to provide the basic functionalities and features of a social media website but with the ability to add more interactive elements to their posts.

**Chapter 1**

**Introduction**

Social media has, inevitably, become a part of our lives. Now more than ever, the population is more invested in social media platforms on a daily basis. The idea of sharing our daily activities, special occasions and travel stories with strangers and friends over the internet, does not stop to excite the people even after the facility being available for several years now.

With the ever-growing advancement in social media & its worldwide users, it is proven that social networks can gain heights of success if they are able to provide unmatchable & reasonable services to the users. Additionally, a platform that allows the end-users to be creative with the content they publish online, is something that gains a following in the blink of an eye.

The idea of this project is to provide users with a clean platform to share media online, but with the ability to generate interactive content if required. They key focus would be on creating a minimalistic experience with powerful features for users to explore, only if they wish to.

**Chapter 2**

**Literature Survey**

The first social media site was Six Degrees, made by Andrew Weinreich in 1997. Six Degrees was pretty popular with users until 2003. That’s when Tom Anderson made MySpace. This new site let users make profiles that played their favourite music. They could even design their own backgrounds. MySpace quickly became the most used social media site in the world.

In 2004, in his sophomore year, Mark Zuckerberg created Facebook. It went public in 2006, and gained a huge popularity. In order to stay at the top, Facebook has been adding the popular traits of its competitors. Facebook added the hashtag feature from Twitter, stories from Snapchat, along with many other features. The site has approximately 2.32 billion users each month.

In 2010, a new social media site by the name Instagram went live. Being much more visual than Facebook, it quickly appealed to younger users. The competitor had the ability to add filters to the users pictures as well as watch each other’s daily stories. It was bought by Facebook in 2011. Instagram had around one billion users in 2018, and had been growing at a rapid rate.

With the huge number of users at any given time on these social media websites, these sites have become major platform for advertisements and marketing.

Along with social media, the internet has seen a rapid growth in the world of content creation as well. At the very basic level, a **social media** and a **content creation** are two different entities.

**2.1 Social Media**

According to Wikipedia, **social media** are interactive technologies that allow the creation or sharing/exchange of information, ideas, interests, and other forms of expression via virtual communities and networks. While challenges to the definition of social media arise due to the broad variety of stand-alone and built-in social-media services currently available, there are some common features:

1. Social media are interactive Web 2.0 Internet-based applications.
2. User-generated content—such as text posts or comments, digital photos or videos, and data generated through all online interactions—is the lifeblood of social media.
3. Users create service-specific profiles for the website or app that are designed and maintained by the social-media organization.
4. Social media helps the development of online social networks by connecting a user's profile with those of other individuals or groups.

Some examples of social media platforms are Facebook, Twitter and Instagram.

In conclusion, social media allows for the user to create a space for themself, where they can socialize and interact with friends and family, as they would in real life.

**2.2 Content Creation**

According to Wikipedia, **content creation** is the contribution of information to any media and most especially to digital media for an end-user/audience in specific contexts. Content is "something that is to be expressed through some medium, as speech, writing or any of various arts" for self-expression, distribution, marketing and/or publication.

Typical forms of content creation include maintaining and updating web sites, blogging, article writing, photography, videography, online commentary, the maintenance of social media accounts, and editing and distribution of digital media.

Some examples of content creation platforms are Youtube, Twitch and Vimeo.

In conclusion, content creation platforms give the users the ability to generate useful or artistic media in the form of text, audio, video, photo, etc. for other users to view and appreciate.

**Chapter 3**

**Inferences Drawn Out of The Literature Survey**

Considering the ever growing usage of social media platforms, as well as the success of content creation platforms, a platform allowing for features from both the platforms would definitely get users interested. A user interface filled with several features and options can lead to information overdose. This is undesirable, and can lead to users spending unhealthy amounts of time on these platforms.

The project serves to provide a simple interface with minimal information to help users focus on the few details. Additionally, users willing to invest into the advanced features can further customize and add interaction to their posts. This would not only create a rich social media platform, but also provide the tools of a content creation platform.

**Chapter 4**

**Problem Statement and Solution Approach**

Social media has been growing more popular by the day. Now more than ever, the population is more invested in social media platforms on a daily basis. With this facility, people can share their daily activities, special occasions and travel stories with strangers and friends over the internet.

However, the leading social media are plagued with information overload. The interface is filled with elements and content to keep user engaged. This often leads to users getting overwhelmed with the amount of information being conveyed.

The solution to this situation is to develop and deploy a social media application with a user-friendly and minimalistic interface. The application would make sure the platform does not take valuable time away from the end-users, while offering more. The users would have to post simple pictures and videos if they wish to do so, but would also have the option to add extra layers of interaction to their posts.

* 1. **Technologies**

The project is planned to be a full-stack application using the commonly used **MERN technology stack**. The MERN stack is a collection of technologies used for building both the front-end as well as the back-end of a website. The term uses the first letter of each technology used, namely **Mongo DB, Express JS, React JS and Node JS**.

* + 1. **Node JS**

Node JS is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the V8 engine and executes JavaScript code outside a web browser. Node JS lets developers use JavaScript to write command line tools and for server-side scripting running scripts server-side to produce dynamic web page content before the page is sent to the user's web browser.

Consequently, Node JS represents a "JavaScript everywhere" paradigm, unifying web-application development around a single programming language, rather than different languages for server-side and client-side scripts.

In the project, Node JS is used to run all the front-end as well as back-end code with simple CLI tools provided with the technology.

* + 1. **Express JS**

Express is a minimal and flexible Node JS web application framework that provides a robust set of features for web and mobile applications. It is an open source framework developed and maintained by the Node JS foundation.

Express provides a minimal interface to build our applications. It provides us the tools that are required to build our app. It is flexible as there are numerous modules available on npm, which can be directly plugged into Express. Express JS is used to build the server-side application of the project. It manages all the requests received from the front-end of the user client.

* + 1. **Mongo DB**

It is an open-source document database and the leading No SQL database. MongoDB is written in C++. This tutorial will give you great understanding on MongoDB concepts needed to create and deploy a highly scalable and performance-oriented database. it is a cross-platform, document oriented database that provides, high performance, high availability, and easy scalability. MongoDB works on concept of collection and document.

The back-end server of the project utilizes this technology to keep track of the user content generated by the application.

* + 1. **React JS**

React JS is one of the most popular JavaScript front-end libraries which has a strong foundation and a large community. React JS is a declarative, efficient, and flexible JavaScript library for building reusable UI components. It is an open-source, component-based front end library which is responsible only for the view layer of the application. It was initially developed and maintained by Facebook and later used in its products like WhatsApp & Instagram.

The project makes use of this library to build the UI or the front-end of the application.

**Proposed Project Activity Chart**

**(7th & 8th SEM)**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Activity to be Done** | **Date(From)**  **DD-MM-YY** | **Date(To)**  **DD-MM-YY** |
|  |  |
| 1. | Project title selection |  |  |
| 2. | feasibility study |  |  |
| 3. | Literature survey |  |  |
| 4. | problem statement |  |  |
| 5. | requirement elicitation |  |  |
| 6. | Solution approach |  |  |
| 7. | Designing solution |  |  |
| 8. | Hardware/tool implementation |  |  |

**References**

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* https://en.wikipedia.org/wiki/Content\_creation
* https://en.wikipedia.org/wiki/Node.js
* https://en.wikipedia.org/wiki/Express.js
* https://en.wikipedia.org/wiki/MongoDB
* https://en.wikipedia.org/wiki/React\_(JavaScript\_library)