**Assignment**

You are building a new social media platform that will allow users to create and share posts, as well as follow and interact with other users. The platform should have the following features:

1. Users should be able to create an account and log in to the platform.
2. Users should be able to create, edit, and delete posts, as well as view and search for other users' posts.
3. Users should be able to follow and unfollow other users, as well as view their list of followers and following.
4. Users should be able to like and comment on other users' posts.
5. Users should be able to receive notifications when other users interact with their posts (e.g., likes, comments)
6. The platform should also have an analytics dashboard where administrators can view usage statistics and user engagement metrics.

**Requirements**

1. Design a scalable and performant system for the social media platform.
2. Create a detailed architecture diagram that illustrates the different components of the system and how they interact with each other.
3. Identify and explain any trade-offs made in the design.
4. Provide a list of technologies that would be used in the implementation of the system.
5. Provide an estimate of the expected number of concurrent users the system can handle.
6. Identify and explain the steps that will be taken to ensure the scalability and maintainability of the system.

**Evaluation**

Your submission will be evaluated based on the following criteria:

1. Correctness and completeness of the system design.
2. Scalability and performance of the system design.
3. Proper consideration of scalability and maintainability issues.
4. Clarity and quality of the architecture diagram.
5. Justification of design decisions and trade-offs.
6. Estimate of the expected number of concurrent users.
7. Explanation of steps taken to ensure scalability and maintainability of the system
8. Quality of the overall presentation of the system design

This assignment focuses on the scalability and maintainability of the system, as well as the ability to handle a large number of concurrent users, and also has an added complexity of analytics dashboard for admin.

For Submissions and Queries about the assignment, please send an email to - [akash@xhipment.com](mailto:akash@xhipment.com) and [bharat@xhipment.com](mailto:bharat@xhipment.com)

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