ACTIVE CHAT MONITERING

Initial Synopsis

Members:

Dhruva Kuntamukkala- 220911630

Aditya Kadam- 220911578

Mohammad Azeem- 220911388

Table of Contents

1. System Requirements

Hardware Requirements:

Desktop/Laptop

- **Processor:** Dual-core processor (Intel i3 or equivalent).

- **RAM:** 2 GB or higher.

- **Storage:** Minimal storage required, as the system only needs enough space to run a web browser.

- **Display:** 1024x768 resolution or higher.

- **Internet Connection:** Stable internet connection (Wi-Fi or Ethernet) with at least 1 Mbps speed for smooth real-time communication.

- **Operating System:**

    o   Windows 7 or later

    o   macOS 10.10 or later

    o   Linux distributions supporting modern browsers.

Mobile Devices (Smartphones/Tablets)

- Processor: 1.2 GHz dual-core processor or better.

- RAM: 1 GB or higher.

- Storage: Minimal, only for web browser data.

- Display: A responsive design ensures that the app works on most smartphones and tablets.

- Operating System:

    o   Android 6.0 or later.

    o   iOS 11 or later.

Software Requirements:

- Web browser: Google Chrome (latest version)

- Programming Languages: Python , HTML, CSS, JavaScript

- Real-Time: Socket.IO, WebSocket API.

- Validation: jQuery Validation, Parsley.js.

- **Operating Systems:** Windows 7 or later

- **Code Editors**: Visual Studio Code, Sublime Text, Atom.

Key Features:

- **User Authentication**: Users can easily create accounts through a simple signup process and securely log in using their credentials. The system ensures password security with encryption, protecting user data from unauthorized access.

- **User Profiles**: Each user has a profile that includes basic information such as username, profile picture, and status. Users can view and edit their profiles, allowing for personalized experiences and connections within the chat community.

- **Real-Time Chat**: The system supports instant messaging, enabling users to communicate in real-time. Users can participate in one-on-one chats or join group conversations, making it versatile for various communication needs.

- **Admin Dashboard**: Admins have access to a dedicated dashboard where they can monitor ongoing conversations and user activity. This feature allows for effective oversight of chat interactions, ensuring a safe environment.

- **Content Moderation**: Admins can define a list of restricted words that users are prohibited from using in chats. If a user violates this policy, they receive automatic warnings for their first two offenses, and their account may be temporarily locked after the third violation to maintain community standards.

- **Security Features**: In addition to password encryption, the system employs secure data transmission protocols (e.g., HTTPS) to protect user information during communication, further enhancing overall security.

- **Local Data Storage**: User settings and chat history can be stored locally in the browser, allowing for quicker access and smoother user experience during sessions

Model Design with Block Diagram

Block Diagram of Active Chat Monitoring System

User	
Signup/Login	
User Profile	Admin Dashboard
Real-Time Chat	User Management
Content Moderation	Database
Notifications	