BASIC DETAILS OF TEAM & PROBLEM STATEMENT

Organization/Ministry/Student Innovation	Ministry of Social Justice and Composite Regional Empowerment, Centre (CRC Department of Empowerment of Srinagar), Persons with Disabilities.
Problem Statement Code	RK755
Problem Statement Title	Tracing IP address and details of unidentified participants while academic sessions.
Team Name	Sneaky Slanderers
Team Leader Name	Yajur Tayal
Institute Code	U-1056
Institute Name	Netaji Subhas University of Technology
Theme Name	Blockchain & Cyber Security

SOLUTION DETAILS

AUTHENTICATION APP

The Authentication App complement the Browser Extension that logs in **students/teachers** through either of them and **periodically** keeps track of their IP addresses and sends this to the **Centralized Database**.

DATABASE

The Database that maps users to their **Unique IP addresses**.

GATEWAY

The Gateway flags users as **authorized/unauthorized** depending on the matching status of their current IP address to the one in the database.

BROWSER EXTENSION

- **The Browser Extension** allows **teachers** to keep track of **authorized and unauthorized students** present in the class meeting.
- It also logs in **students/teachers** through either of them and **periodically keeps track** of their **IP addresses** and sends this to the **Centralized Database**.
- **Profanity filter** to the **Browser Extension** that **censors all vulgar text/slurs** within the chat.

AUTHENTICATION

- **REGISTRATION**: The Students will be required to register themselves on either the extension or the app using their College Roll Numbers, Email IDs and Phone Numbers.
- **LOG-IN**: The Students will be required to login in to the app or extension using their Unique ID and passwords.

An **Automated Spreadsheet** that tracks all the participants and informs the teacher about their **authorization status** through **a pop-up notification/drop down menu.**

TECH STACKS

APPLICATION

Flutter

BROWSER EXTENSION

HTML CSS JAVASCRIPT

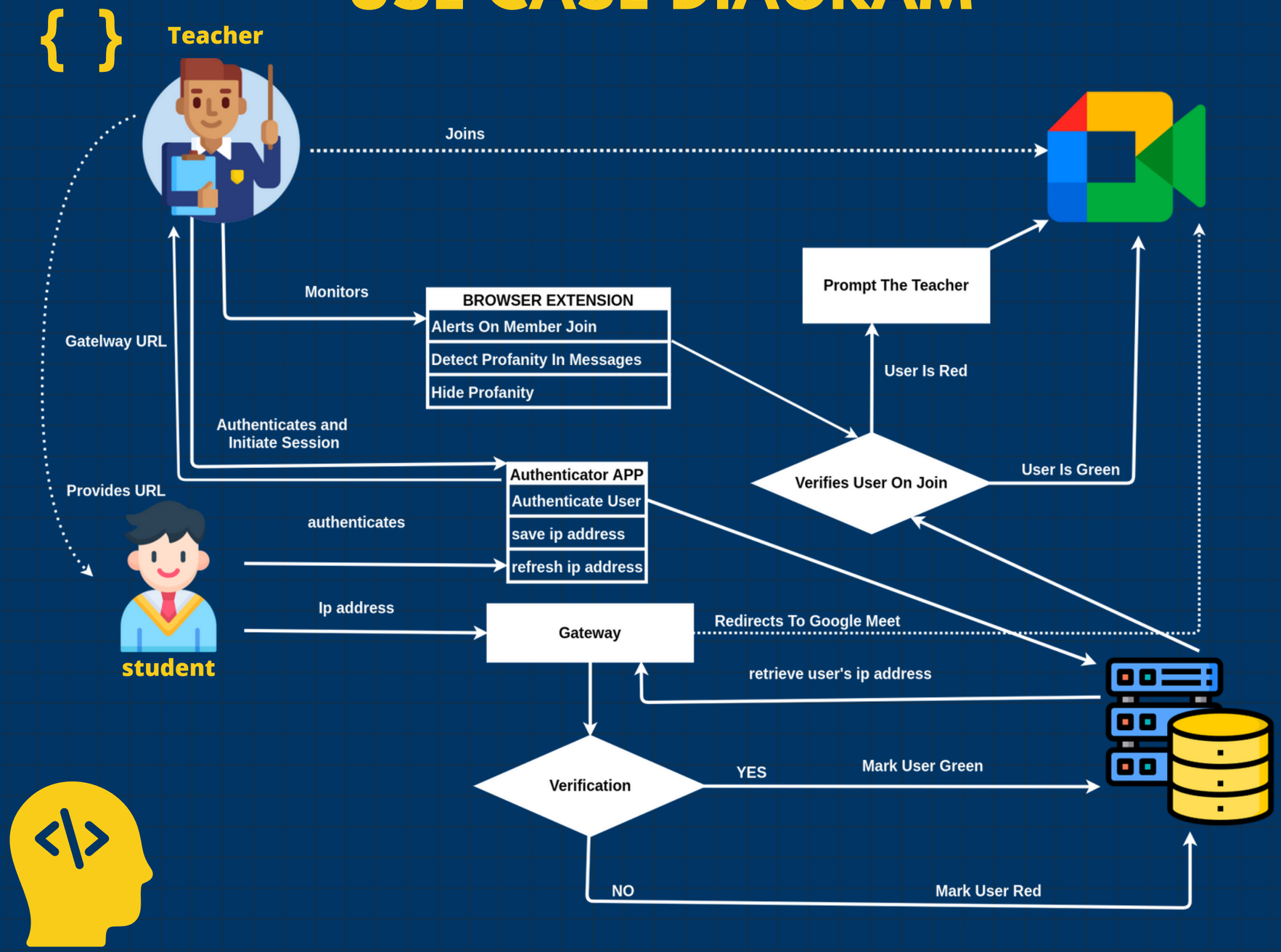
BACKEND

node.js

DATABASE

mongoDB

USE CASE DIAGRAM



SHOWSTOPPERS

- Inability to **show popups** and **filter profanity** on **mobile devices** constrains the teacher to join the meeting through a browser on a **PC using the extension.**
- Slight possibility of **unauthorized login/registration** by a person who has been willingly given the **credentials** by a student.
- Possible **inconvenience** for the teacher if the student **joins from a non registered device** in case of **malfunctioning** of registered device.

SCALABILITY

- To ensure the authenticity of users during login **we would take pictures of the users,** which can then be verified by the teacher later to check for any discrepancy.
- Adding **transport layer security(TLS)** to further enhance the overall security of the system.
- Securing the **Application** against **IP Spoofing.**
- Making our Product Compatible with **Multiple OS and Browsers.**

TEAM MEMBER DETAILS

Name	Branch	Stream	Year
Yajur Tayal (C)	B Tech.	CSAI	II
Manasvi	B Tech.	MAC	I
Takshil Rastogi	B Tech.	CSAI	II
Shivam Shukla	B Tech.	CSAI	II
Harsh Goyal	B Tech.	CSAI	II
Parikshit Dabas	B Tech.	CSAI	II
Dr. Mohinder Pal Singh Bhatia (Mentor)	ACADEMIC	Software Engineering & Operating Systems	-
Manu Sheel Gupta (Mentor)	INDUSTRY	Operating Systems & Software Engineering	-