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Proposed Main Features:

- Our project main target is to create video streaming based on webrtc.
- Screen controlling and Screen sharing while video streaming.
- Audio mute/unmute option.
- Chat between teacher and student while video streaming.
- Record teacher's activity during video streaming and save it on the system.
- Teacher can see the student participate list.
- Basic CRUD functionality (Profile create and maintenance by teacher and student).
- Admin panel for monitoring teacher and student activities and also manage other admin activities.
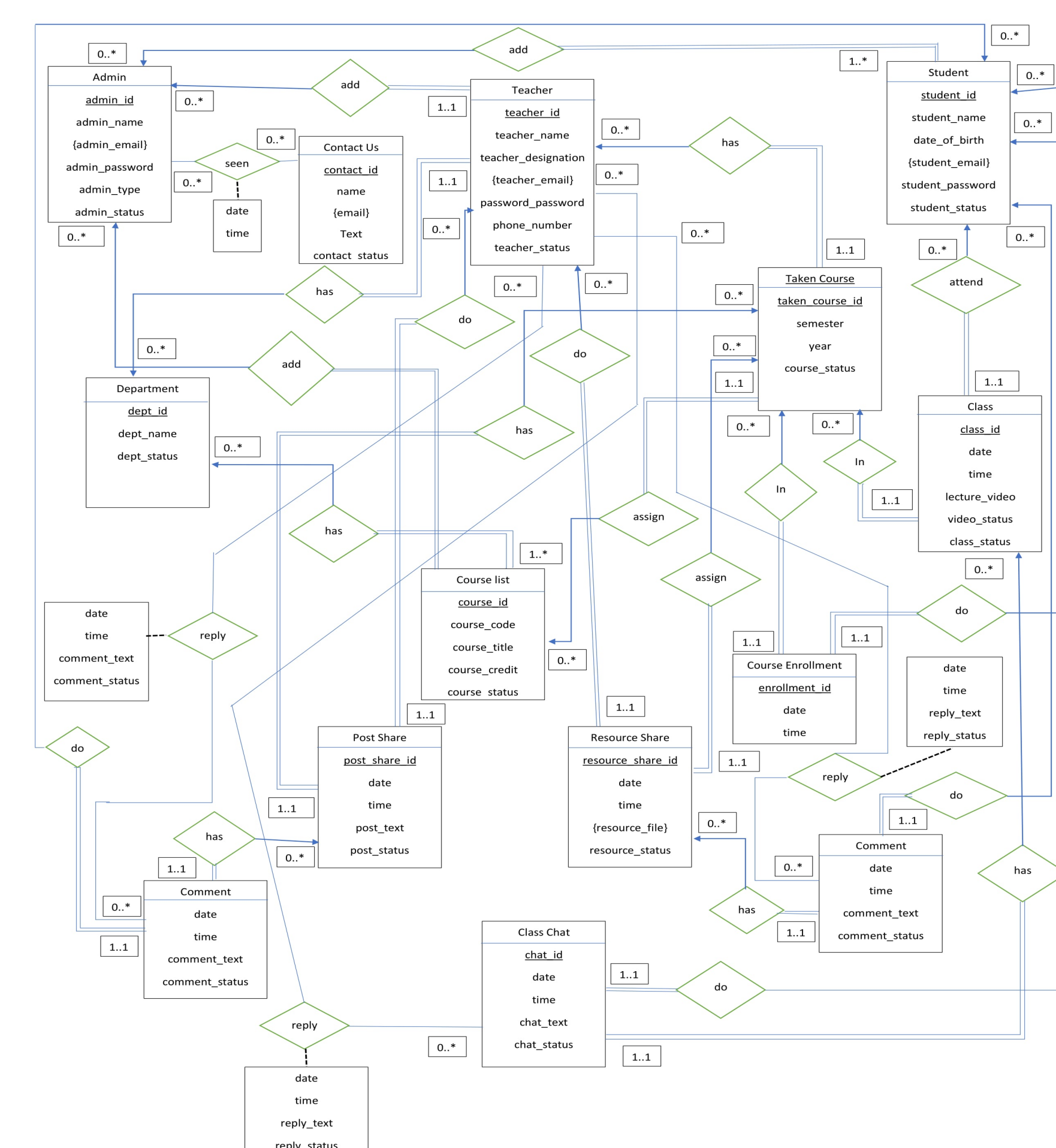
Proposed Additional Features:

- Basic CRUD functionality include file upload, download, delete etc.
- Comment on post both teacher and student.
- Teacher will be able to take attendance dynamically.
- Teacher will be able to test student in quiz format.
- Create announcement by teacher.
- Teacher will be able to take assignment from student through the system.

Tools that we using:

- We have used Bootstrap5 (Alpha) version for designing webpages with some custom CSS.
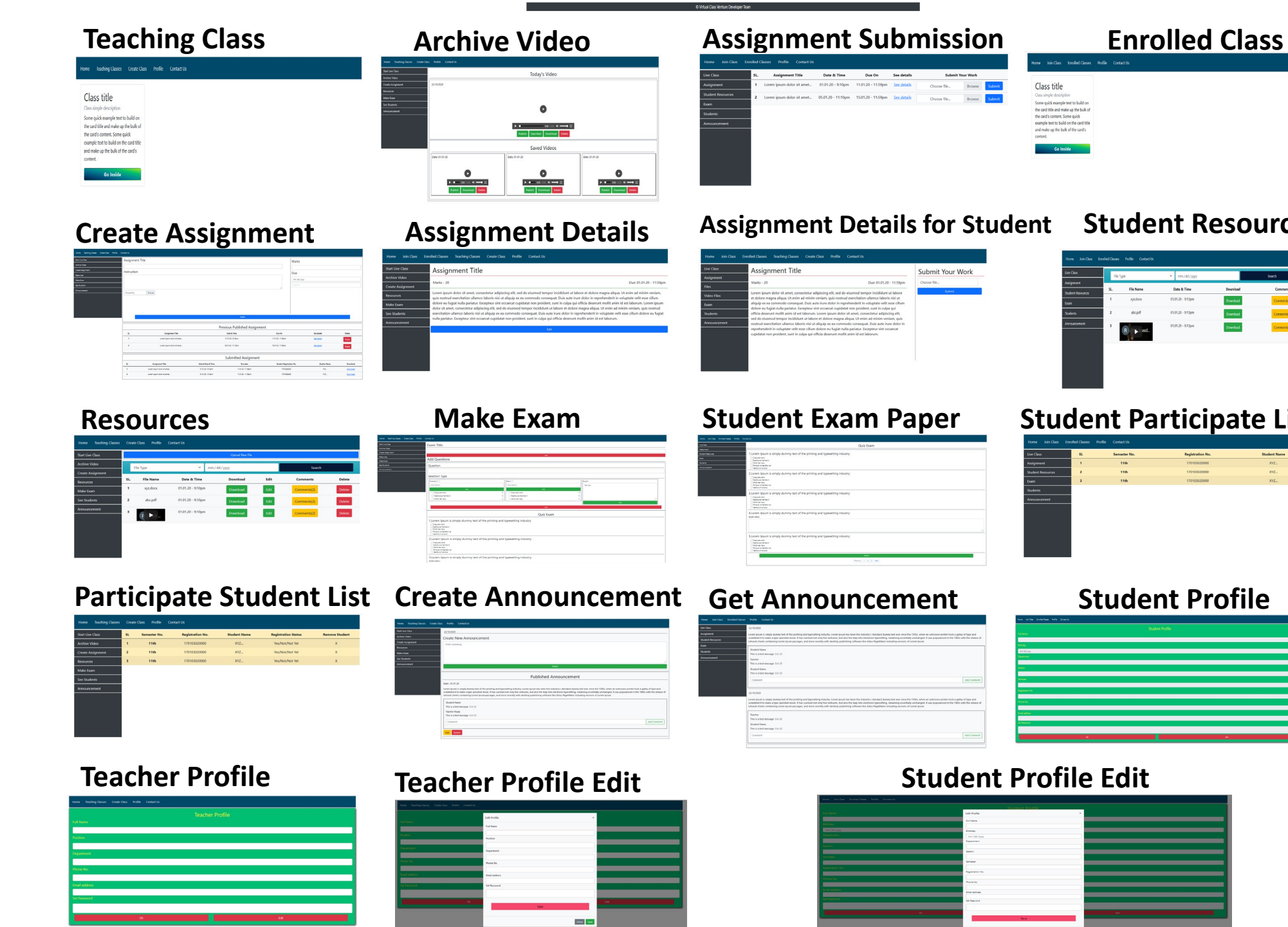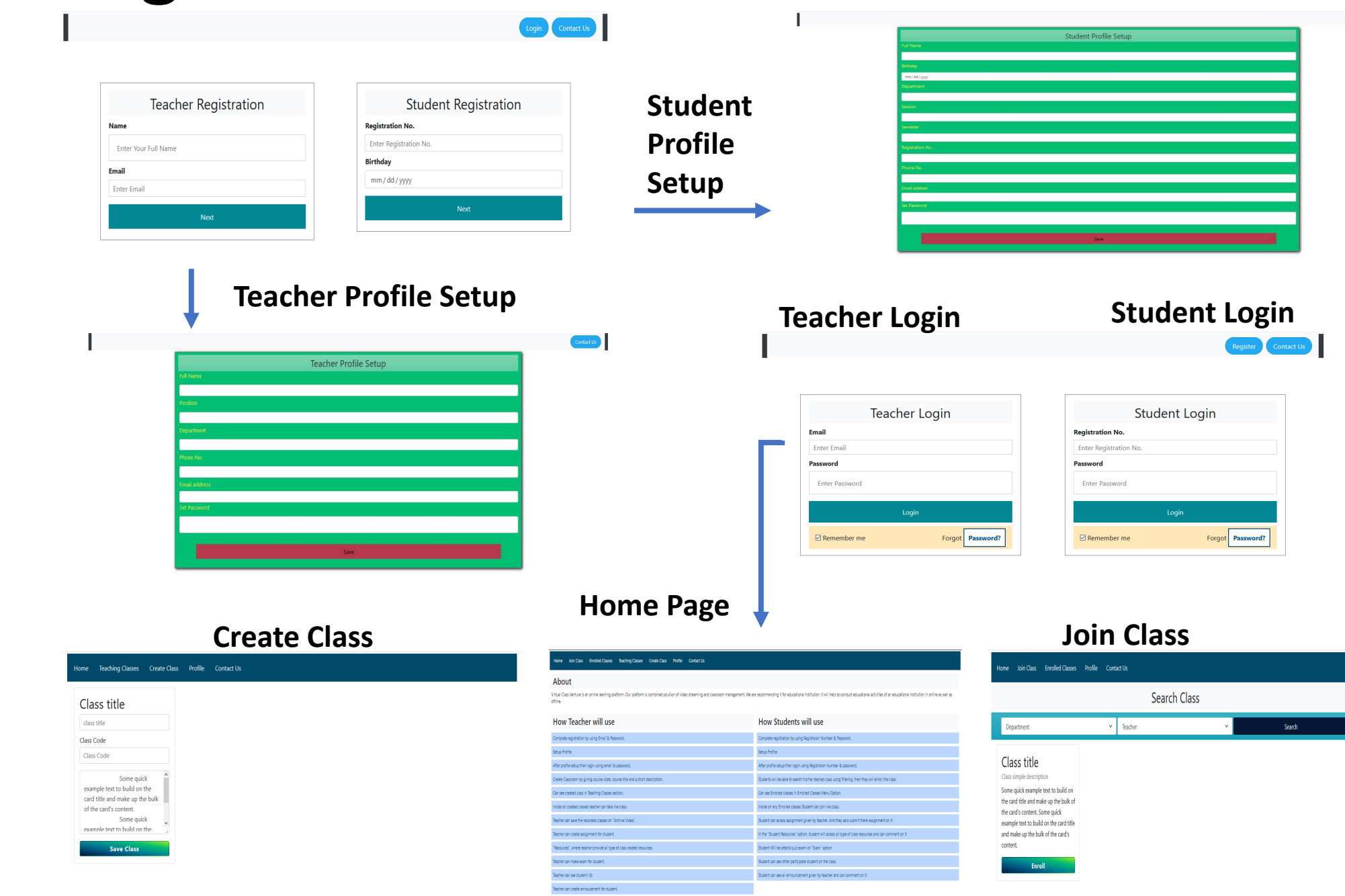- In future we use MySQL for database.

- For implementing WebRTC and all dynamic features we have used Node.js.
- We have already used JavaScript to design some feature and we will continue it for future development.
- For developing some features we have used jQuery and we will continue it for future development.
- If an API is needed for project development, we will use it in the future.
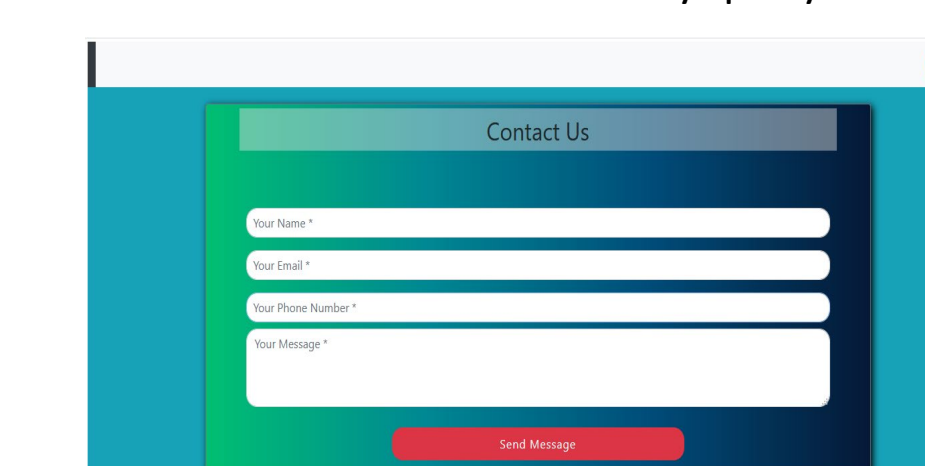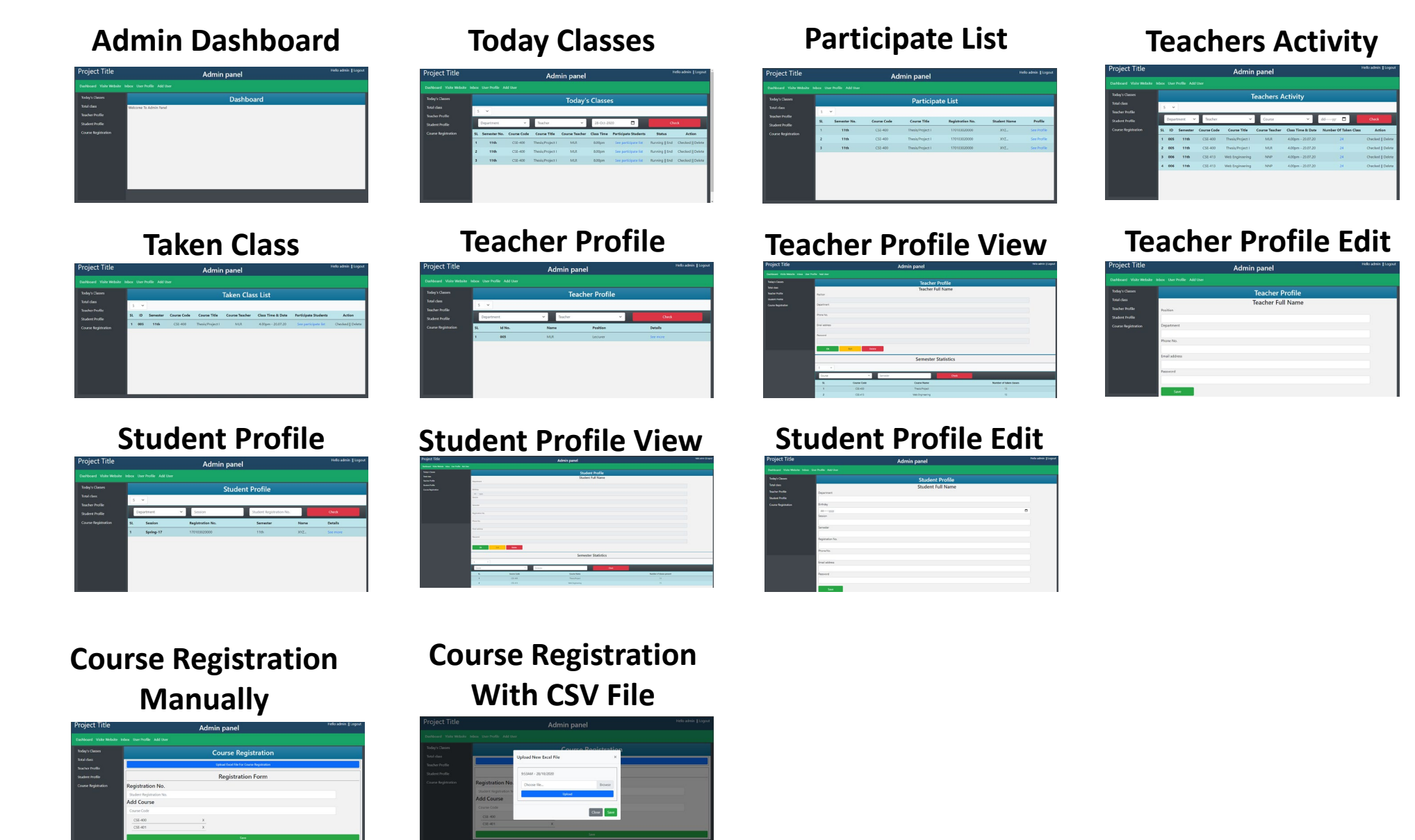
ER Diagram:

User Interface Design:

Registration form

This is a general contact page. This can be used by both the student and the teacher for any query to the admin.

RTC Interface:

This is the initial stage of live class before class started.

When host click on the 'Start Connection' button it will be connected with user. But before connect user have to answer the confirmation message. Here we only done one to one connection.

Interface of Screenshare permission when user press on the screen share button.

After choosing screen window user will be able to see the shared screen which is given below.

When user press the `Start Record` and record will be continued.

After `Stop Recording` user can download the recorded video.

Downloaded video when played in video player.

After click the `Chat` button then chat will be started.

Admin Interface:

Works Done:

- We have completed our frontend, ERD and some of RTC related works in last semester.
- In this semester we have completed screenshare, chat, video recording and downloading part of RTC.
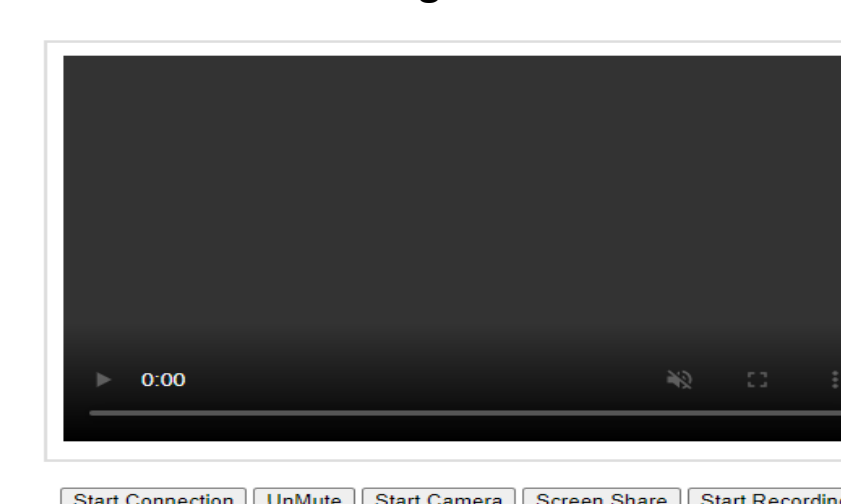
Future Work:

- We want to complete multipair connection of RTC and also want to implement our database.
- If we get enough time, then we will complete our additional some features.
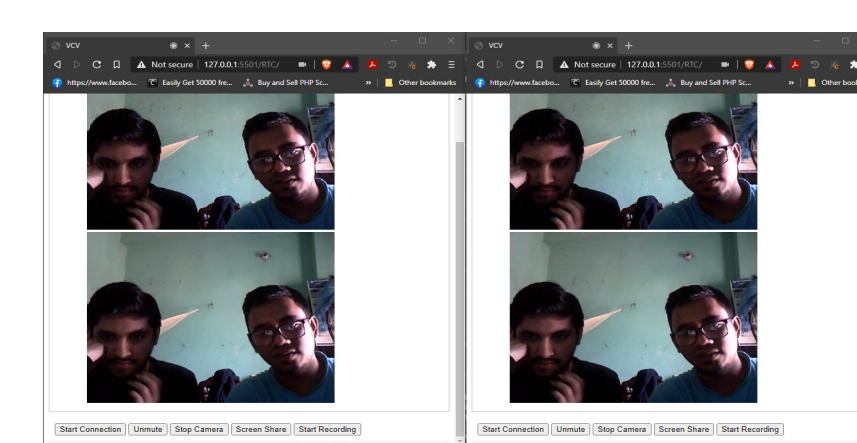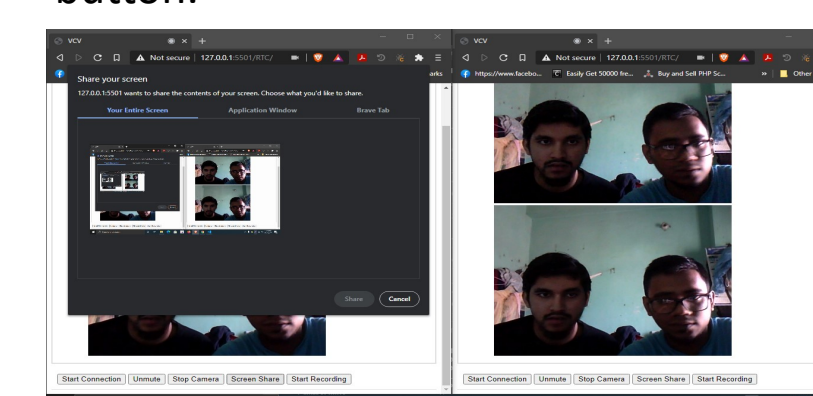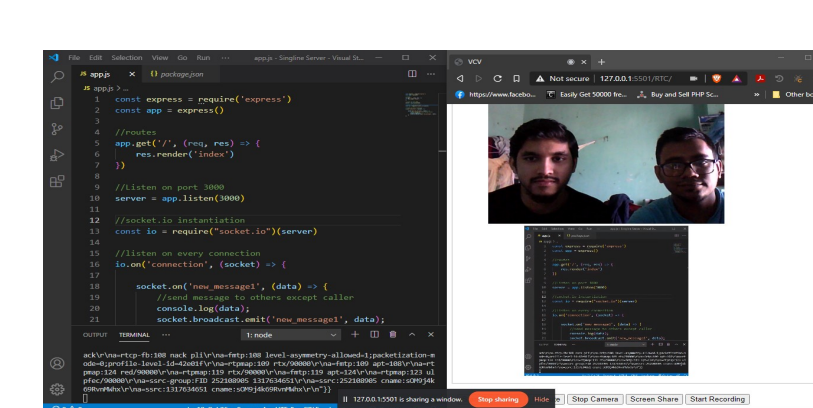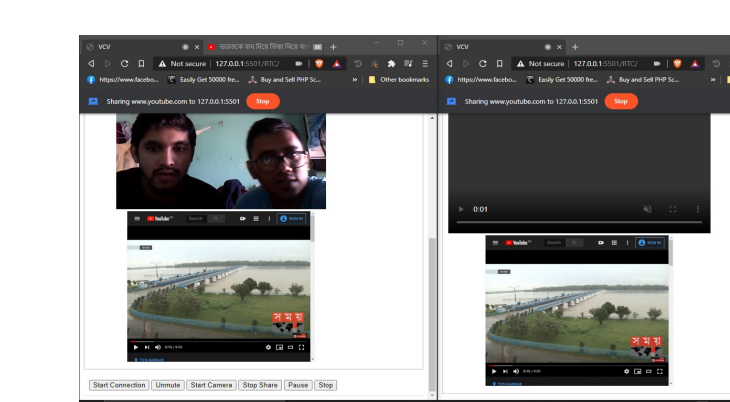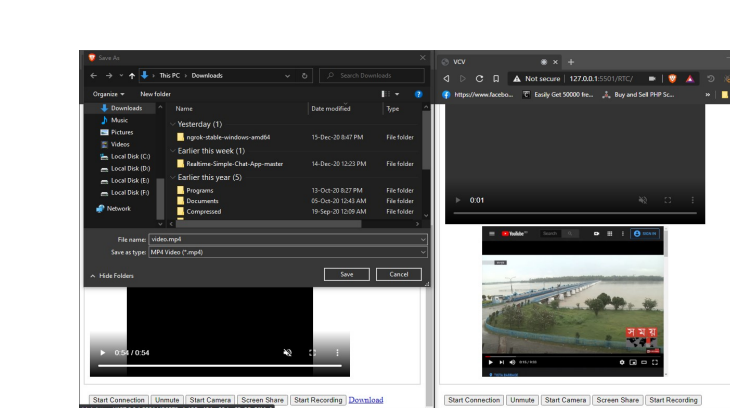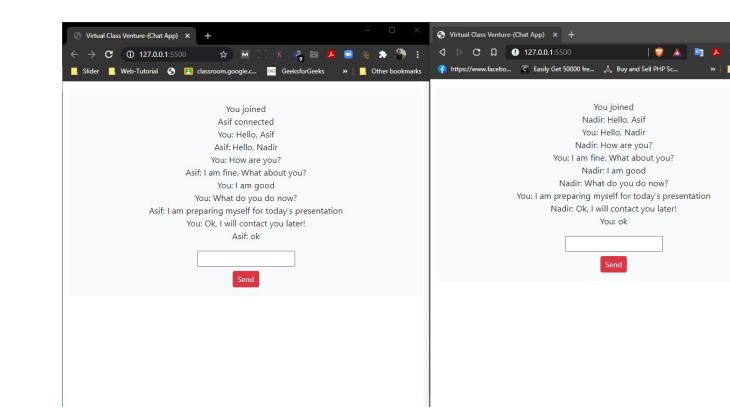
Contribution:

- Nadir has done frontend and chat app of our project.
- Asif has done other part of WebRTC which is our main feature of project.
- Other project related work like as ER Diagram, poster design and background study have been done by both.
- We both understood every single line of code there is in the project whether it is frontend, RTC and ER Diagram.

Supervised by: Noushad Sojib