Implementation of Virtual Class Using WebRTC

A project report submitted to

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ABSTRACT

A virtual classroom is an online learning environment that enables student and the instructor to interact as if they were face to face in a real classroom. We aim to provide live streaming of screen along with audio and video of lectures to students; the students can send audio data to the instructor (while asking doubts). The instructor can share the ppt, notes, assignments and quizzes with the students and also provides the option for the student to download the above. The attendance of students is automatically detected when he/she logs in and status is sent to the instructor.

The Project is peer-to-peer (p2p) based implementation that enables browsers to interact with Real Time Communication (RTC) via JavaScript API's. Any connected peer (Instructor) in the session can create a new classroom and invite a set of peers (Students) to join the classroom and be able to broadcast his voice, his screen and video to all the peers (Students) connected in that session.

We use Latest Technology of WebRTC to implement this Project. WebRTC is an open source project that enables web browsers for Real-Time Communications (RTC) using simple Javascript APIs. The purpose of WebRTC components is to help build a strong RTC platform that works across multiple web browser and across multiple platforms.