Online Interview Platform

Project ID - IVITB1711

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Year - IV Year

Team Mentor -
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College - Rajalakshmi Engineering College

Overview

- Making interview process easier
- Real time collaboration
- Improving quality of interviews
- Hiring candidates with preferred qualifications
- Reduce number of malpractice
- Prevent server crash

Abstract

Video calls have become an integral part of today's communication. Along with the increase in live video usage, the quality of interviews has dropped since the interviewee has found different ways to malpractice and clear the interview even though they don’t have the basic qualifications to join the company. This platform will provide video call facility and code editor with a built in compiler which allows the interviewee to type code in the editor given rather than shifting tabs. With the help of this platform, we can reduce the number of malpractices and also make sure candidates having the basic qualifications are selected. Thus, the interviewer will be able to assess the candidate properly and make decisions based on his/her performance.

Motivation

- Reducing malpractice during interviews
- Screening out candidates lacking required qualifications
- Fair experience

Objective

- Reduce number of malpractice
- Improve quality of interviews
- Collaborative programming
- Real time video calling
- Single sign on
- Built in chat box
- Interactive
- Peer to Peer
- Program saving functionality

Literature Survey

Author/Year	Title	Methodology used/Dataset	Advantages	Limitations
1.Debajyoti pal 2.Vajirasak vannijja	Online learning during COVID19, students perception of media quality July - 2020	Network performance Analysis	Proper media streaming without delays	Using 3 similar applications to make an analysis.
1.Sajida karim 2.Hui he 3.Mehak khan	The evaluation of video quality from original to the social clouds May - 2020	MediaInfo tool (version 0,7.97).	The design and development of this QOE framework will help social media companies to give better experience to their users.	Less quality of experience

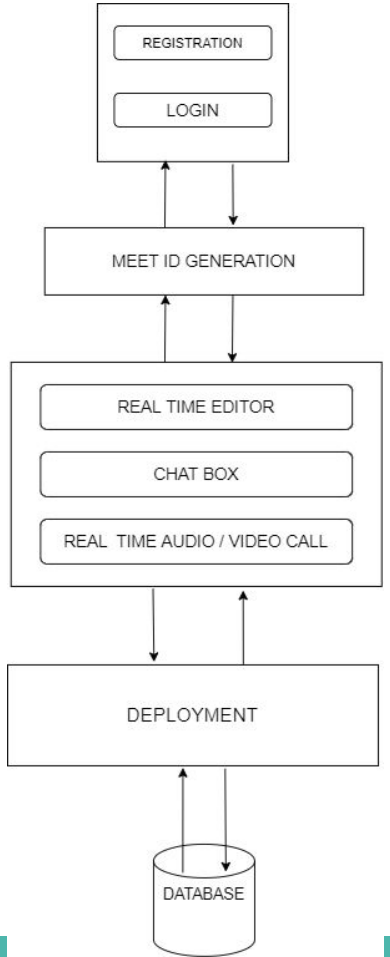
1.Zarul Fitri Zaabaa 2.Khaled Suwaisb 3.Nur Azimah Mohda 4.Abdalla Wasef Marashdiha	Web Application Security from XSS attacks 2019	An Investigation on Static Analysis with other Algorithms to Detect Cross Site Scripting	The study has discovered that static analysis is better than other approaches at detecting XSS vulnerabilities	Inefficient in identifying XSS vulnerabilities in PHP web applications.
1.Zarul Fitri Zaaba 2.Abdalla Wasef Marashdih	Cross Site Scripting analysis November - 2017	A survey on vulnerability removing approaches in PHP based Web applications	This study shows that no approach is found to detect and eliminate XSS vulnerabilities in web applications based on PHP	Even though many studies have focused on detecting XSS vulnerabilities, only some have been carried out on eliminating them
1.Ulfar Erlingson 2.Yinglian Xie 3.Benjamin Livshits	End to End web application security	Collaboration of client and server to achieve security goals	Mutation-Event Transforms algorithm	Web clients must be enhanced

1.Quang-vinh dang 2.Claudia-lavinia ignat	Performance of real time collaborative editors at large scale May - 2016	Performance measurement of collaborative editors in real time with large scale settings	Provides clarification on the issues that arise with increase in number of users	Rejection of new users' connection or high delay with increase in number of users
1.Xinggong Zhang 2.Yang Xu	Modeling and analysis of skype video calls October - 2013	Varying packet loss rate , propagations delay ,networth bandwidth	This paper gives a very accurate measurement of the desired outcome.	This method can be used for only Skype Video calls analysis
1.Iqra Basharat, 2.Farooque Azam 3.Abdul Wahab Muzaffar	Database security and encryption June - 2012	Survey of issues and threats in database security	Provides on how encryption is performed in databases, what methods, and algorithms are used and where it is	An increasing amount of application code and logic is moving to the client side, which brings

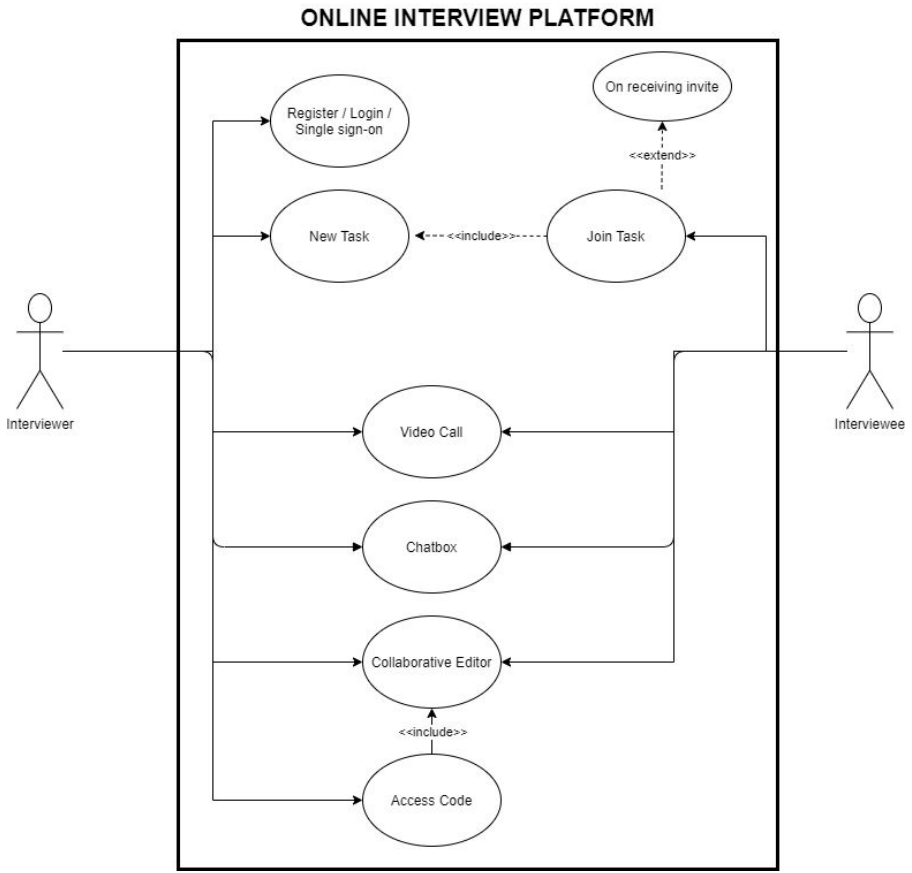
1.Dr.Anwar Pasha 2.Dr.Riyazuddin Qureshi	Transparent data encryption-solution for security database March - 2011	Creation of database master key and protection by the certificate and ways to set the database to use encryption	Provides high levels of security to database files stored on hard drives and other information that requires protection	Limited to Microsoft SQL Server
1.Xiaowei 2.Yuan Xue	A survey on web application Security 2011	Systematizing existing security techniques into a big picture	Surveys the area of web application security such as construction, verification and protection	Popular and valuable target for attacks as they are used for critical services
1.Ann kolanowski 2.Kim kopenhaver 3.Judith tate	Methods to improve reliability of video recorded behavioral data. August - 2010	Cohens Kappa and inter class correlation	This paper also explains how to do reliable video coding in special populations.	Does not explain about how to keep the data confidential.

Ajay Khunteta	A survey on operational transformation algorithms July - 2010	Operational transformation algorithm	Peer to Peer	Consistency
1.Francis pacull 2. Alain Sanoz 3. Andre Schiper	Duplex : A distributed collaborative editing environment Oct - 1994	Splitting documents into individual parts	• Atomicity • Concurrency	The outcome may not be satisfactory or efficient when working with large-scale and heterogeneous environments

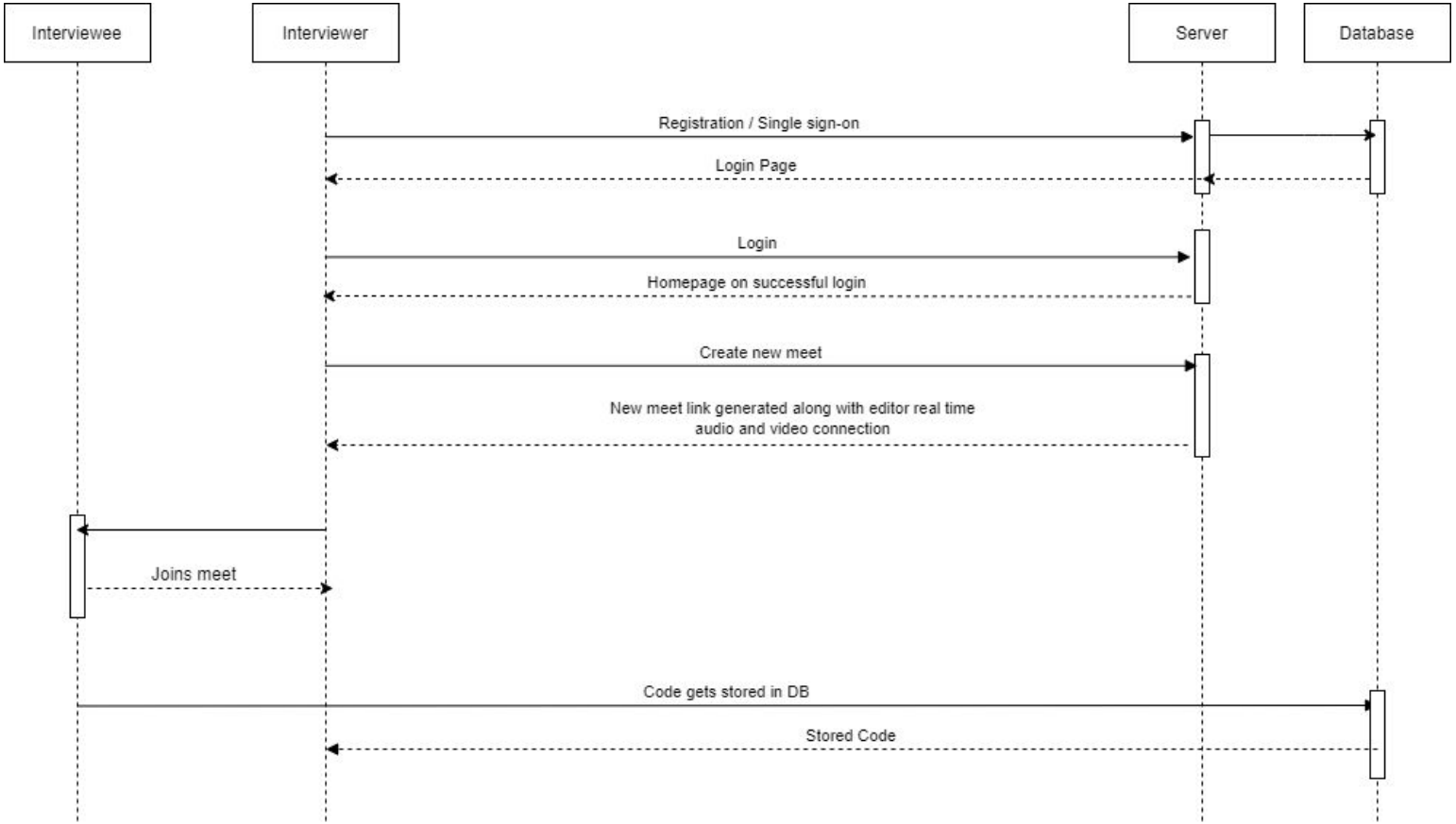
Architecture Diagram



Use Case Diagram



Sequence Diagram



Modules

1. Registration / Login / SSO
2. New Meet ID Generation
3. Collaborative Environment (Editor, Chatbox)
4. Real time video/audio call
5. Deployment

Module 1 : Registration / Login / Single Sign On

- Registration Page (Name, Email, Password)
- Login Page (Email, Password)
- Single Sign On (Facebook)

Technology Stack : Javascript, NodeJS, Express JS, Passport JS, Mongo DB

Module 2 : Meet ID Creation

- New Meet ID page creation
- Unique room id generation

Technology Stack : Javascript, NodeJS, ExpressJS, MongoDB

Module 3 : Collaborative Environment (Editor, Chatbox)

- Editor
- Chatbox
- Collaboration

Technology Stack : Javascript, NodeJS, ExpressJS, PassportJS, Operational Transformation Algorithm, CodeMirror

Module 4 : Real time audio/video call

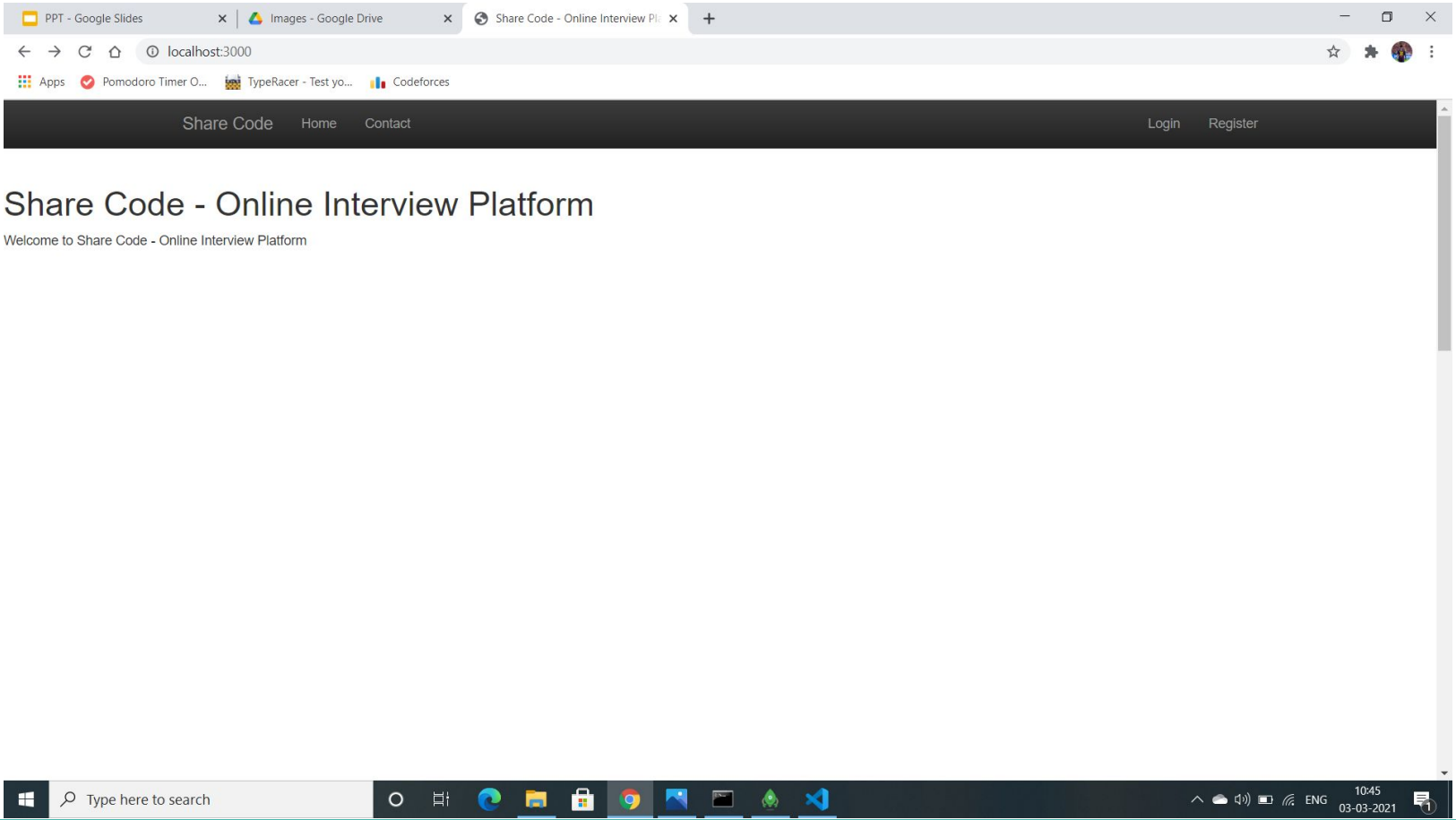
- Audio/Video call UI
- Web RTC implementation

Technology Stack : Javascript, NodeJS, ExpressJS, WebRTC

Module 5 : Deployment

- Deploy Online Interview Platform to Heroku

OUTPUT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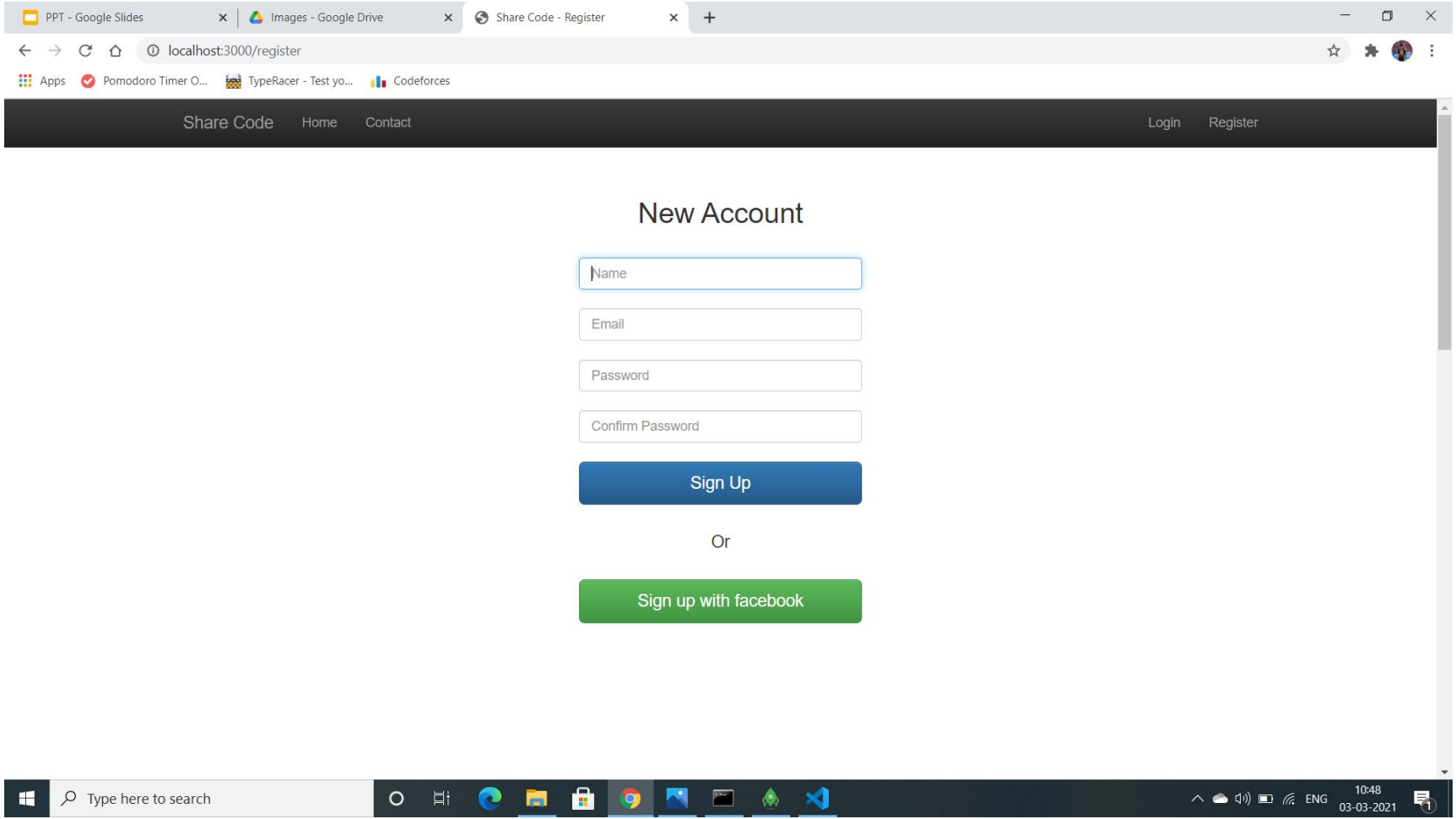
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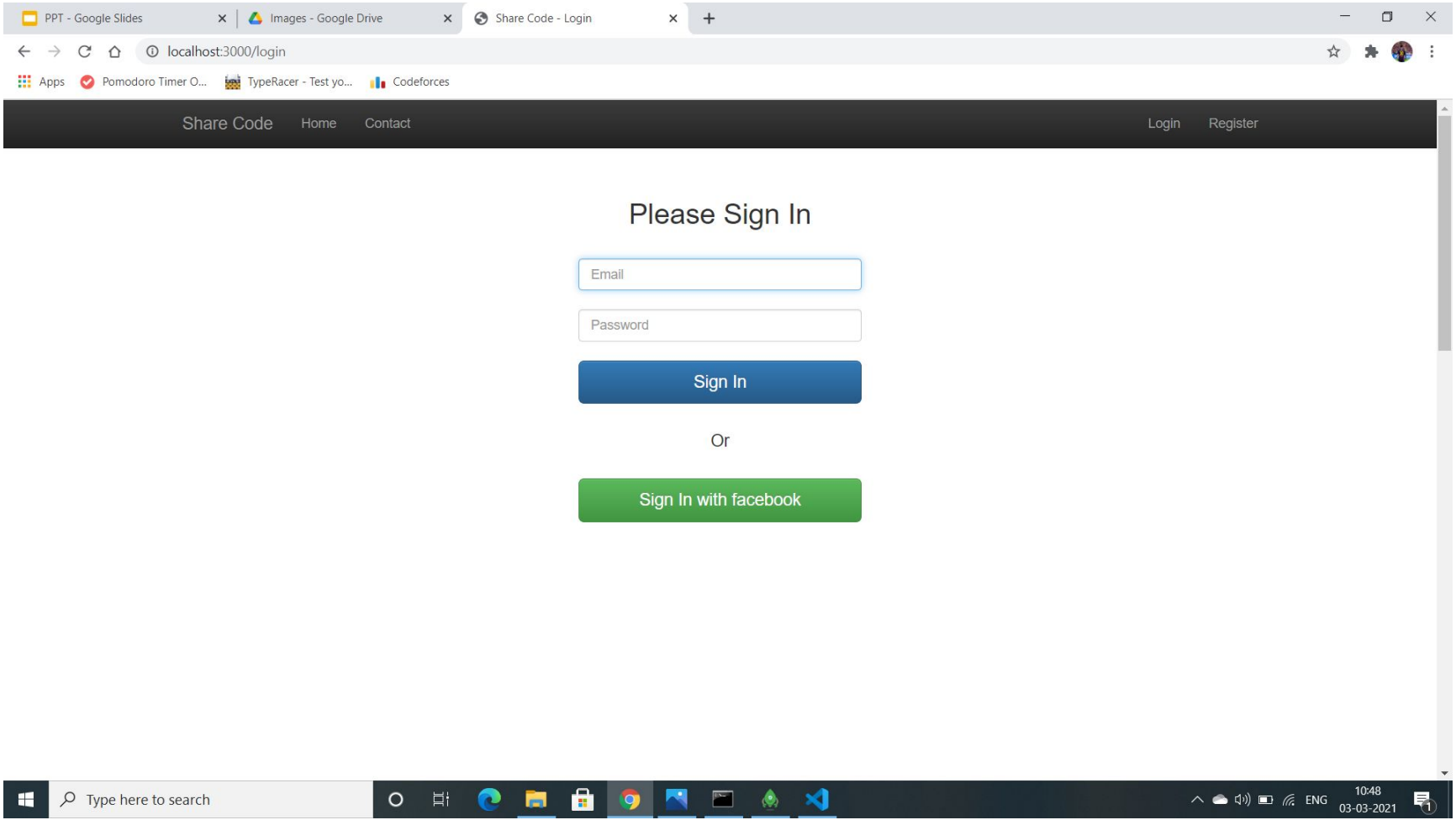
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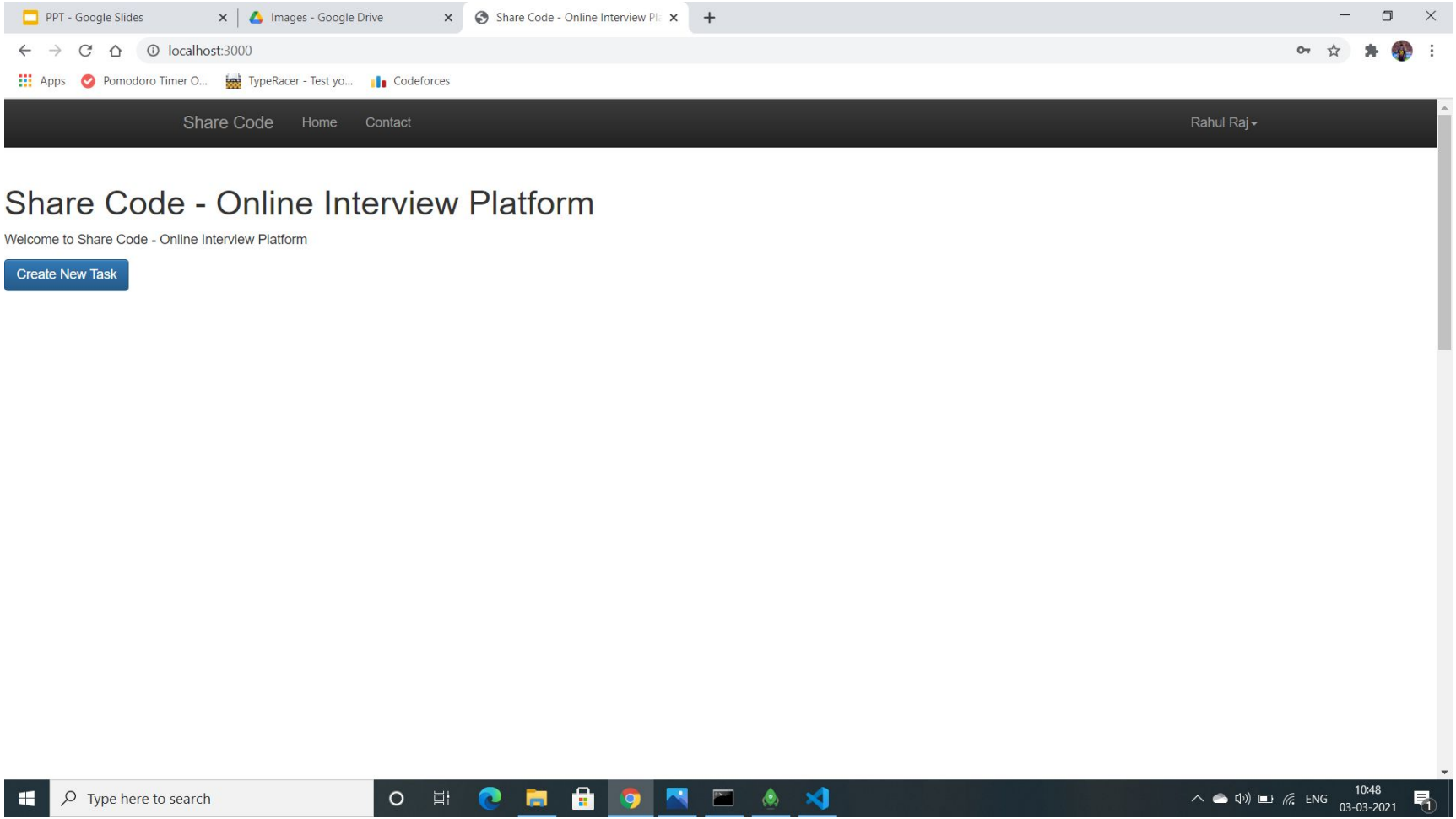
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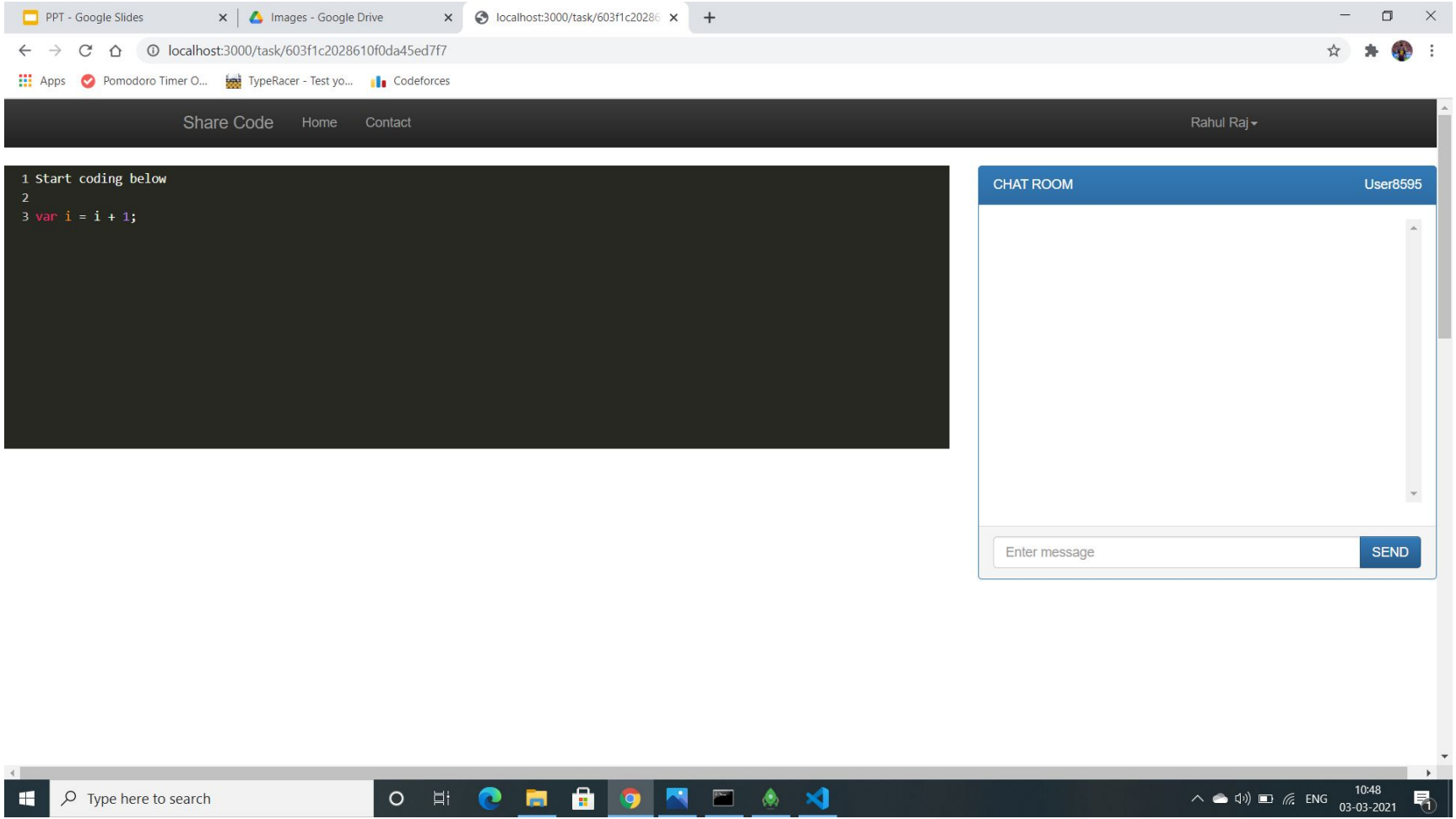
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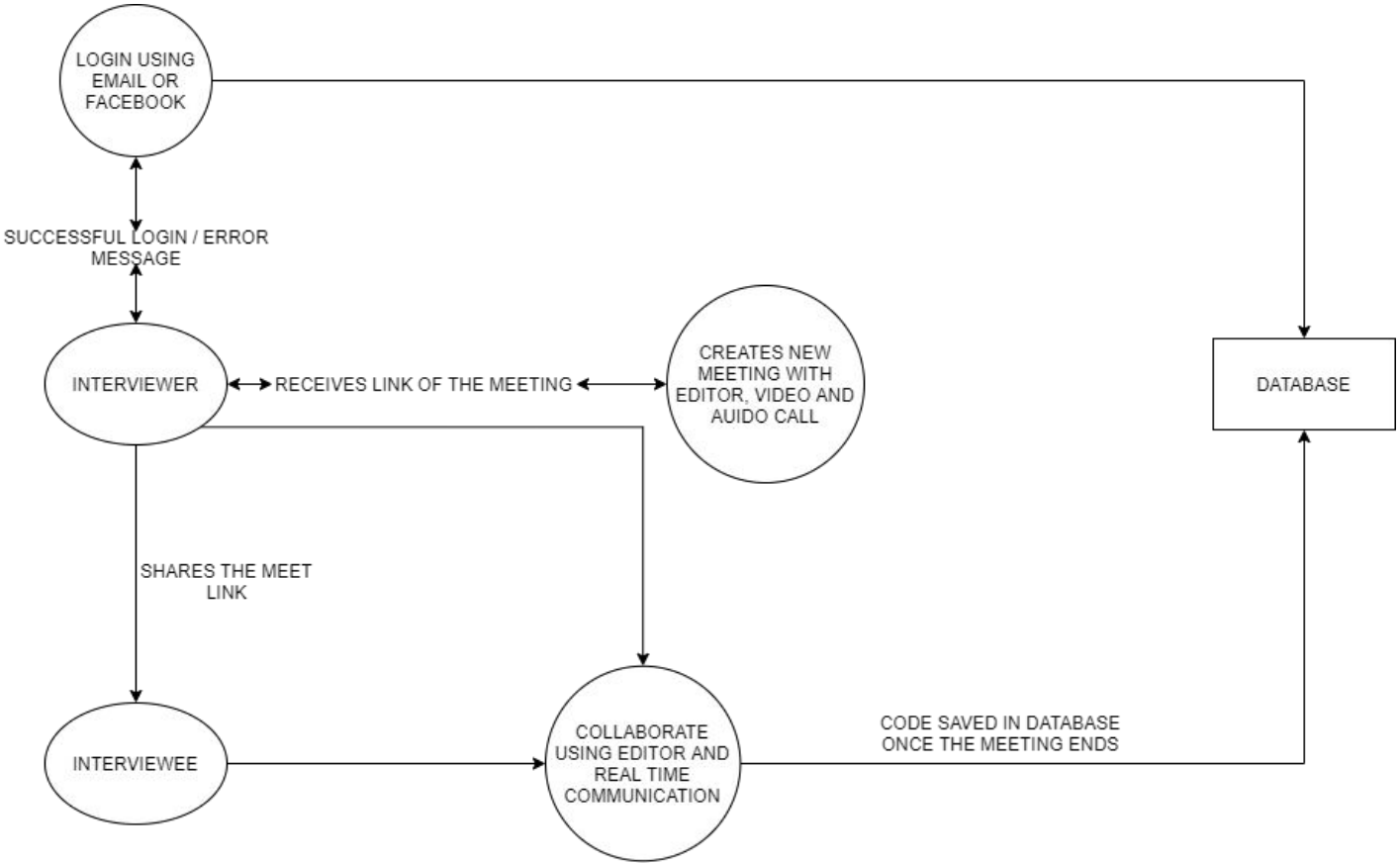
Data Flow Diagram