

FORM 4: RESULTS AND CONCLUSION

TEAM NO: 07

PROJECT TITLE: DESIGNING A WEB BASED CHAT INTERFACE SERVER

EXPERIMENT ENVIRONMENT:

- **Visual Studio Code:**

Visual Studio Code, also commonly referred to as VS Code, is a source-code editor developed by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git.

- **MongoDB Database:**

MongoDB is a source-available, cross-platform, document-oriented database. Classified as a NoSQL database product, MongoDB utilizes JSON-like documents with optional schemas. MongoDB is developed by MongoDB Inc., and current versions are licensed under the Server Side Public License.

- **Python Language:**

Node.js is a cross-platform, open-source JavaScript runtime environment that can run on Windows, Linux, Unix, macOS, and more. Node.js runs on the V8 JavaScript engine, and executes JavaScript code outside a web browser. Node.js lets developers use JavaScript to write command line tools and for server-side scripting.

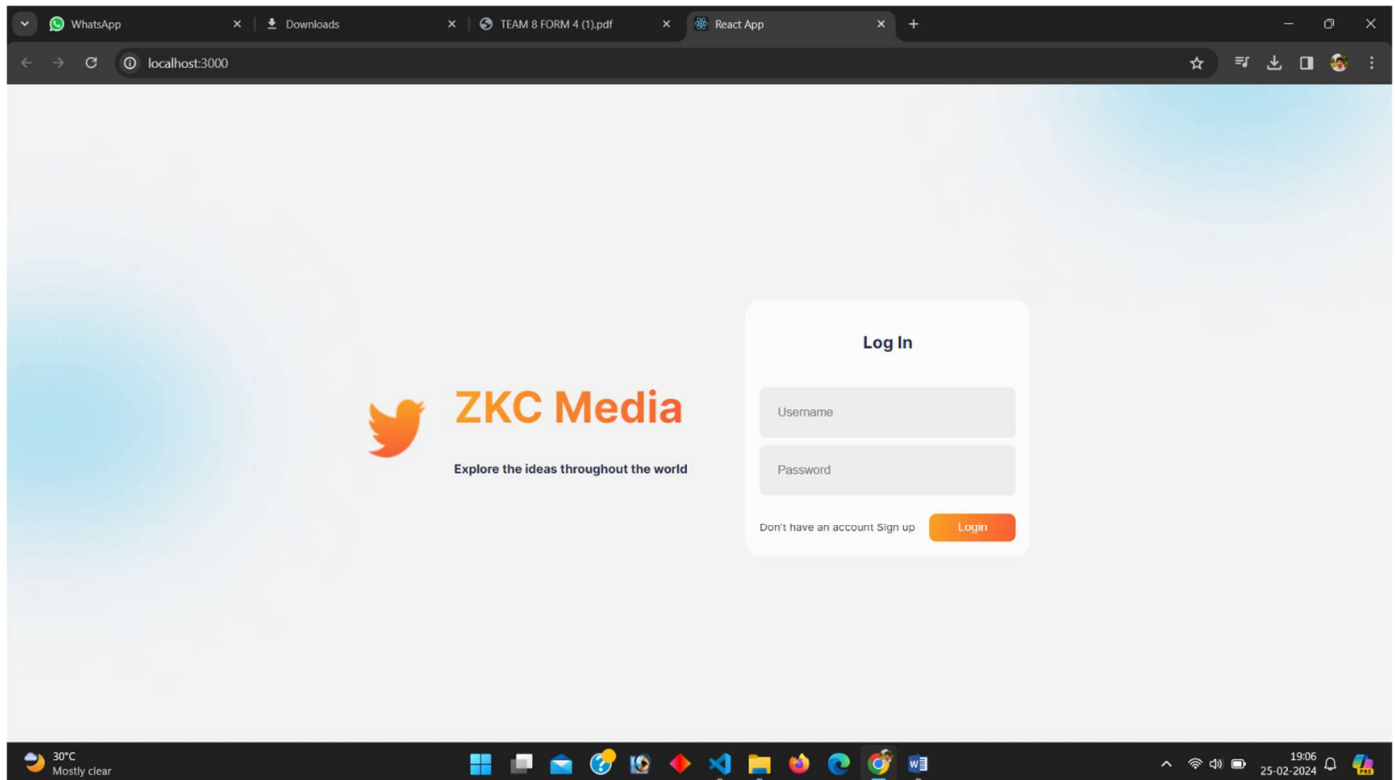
EXPERIMENT:

We have created the web-based project. In which we have created the project using socket.io and express js as server modules, while employing mongodb for the database management aspect. The project consists of frontend and backend work.

FINDINGS 1:

We are creating the front-end application like login page, register page, profile page, feed page, chat page using react js. We are using MongoDB database for storing the data in the back end.

We are able to correctly register the user's data and insert this data into the database. By using this data, the user is able to login into his account.

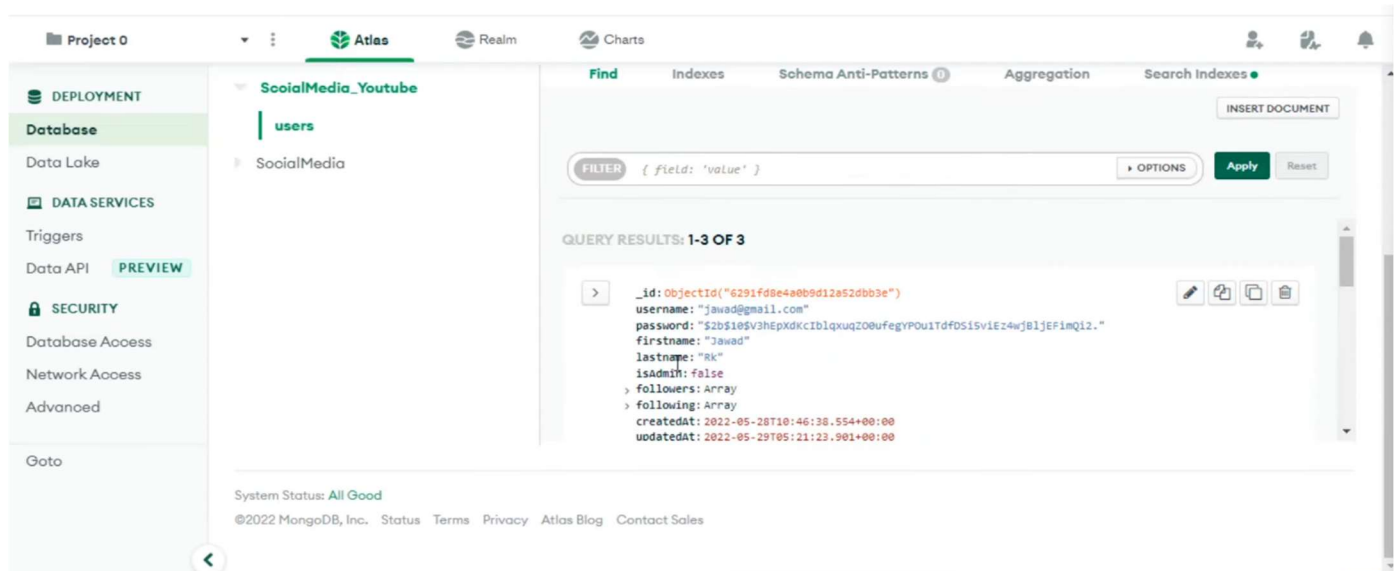


Login Page

FINDINGS 2:

We are creating the front-end application like login page, register page, profile page, feed page. We are using MongoDB database for storing the data.

We are able to correctly register the user's data and insert this data into the database. By registering the data into the database, the user will be able chat and post feed.

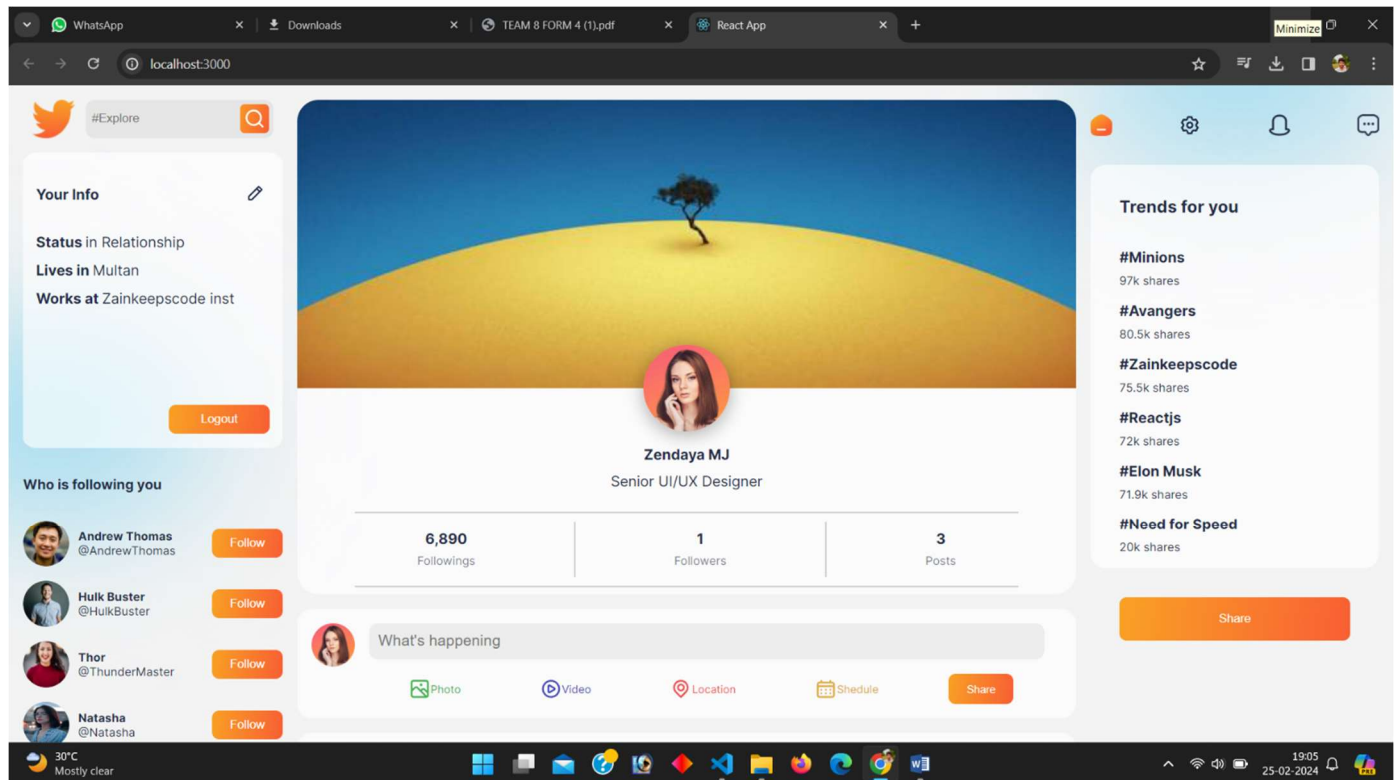


MongoDB database

FINDINGS 3:

Profile is like your digital business card. It should tell someone who you are, what you do, and what you're all about. In profile page we have a profile picture and some info about yourself.

These information is stored in MongoDB database along with the number of people that you are following and number of people that are following you.



Profile Page

PARAMETER TABLE:

S NO	PARAMETER	Explanation
1	First Contentful Paint	First Contentful Paint marks the time at which the first text or image is painted.

2	Largest Contentful Paint	Largest Contentful Paint marks the time at which the largest text or image is painted.
3	Total Blocking Time	Sum of all time periods between FCP and Time to Interactive, when task length exceeded 50ms, expressed in milliseconds.
4	Cumulative Layout Shift	Cumulative Layout Shift measures the movement of visible elements within the viewport.
5	Speed Index	Speed index shows how quickly the contents of a page are visibly populated

CONCLUSION:

This proposed application utilizes socket.io and express js as server modules, while employing mongodb for the database management aspect. For enhanced security measures, this software incorporates methods such as jwt (JSON Web Tokens) and password hashing. A web-based software is created using Node.js to convert large image formats into smaller ones. This software is user-friendly and faster than other Node.js modules. It has features like text messaging, expressive emojis and stickers, group chats, notifications, and security measures.