WhatsApp Clone

COURSE NAME: EDAC

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**WHAT PROJECT DOES**

* This project provides you with Google authentication.
* It allows you to create group texts.
* It allows the user to send and receive messages .
* The UI consists of two parts , i.e. Sidebar Component and Chat Component.
* Sidebar Component:
  + It consists of a search container, We can search the chat rooms by typing keywords as well as group names.
  + The user can add a new chat room in real time.
  + The preview of the last message sent on a chat is seen in each chat group.
* Chat Component:
  + It consists of a chat footer where the user can type and send a message .
  + The message can be sent by pressing the “Enter” key on the keyboard .
  + It consists of a search container, We can search the messages by typing keywords.
  + Whenever a chat room is selected from the sidebar it will be reflected in the chat body dynamically.
  + The user can scroll through the chats.
  + Realtime date and time is displayed under each message.
  + More than one person can message in the same group ,from different accounts .
  + The last seen of the user is seen in the chat header.

**WORKING SCENARIO**

* First we sign in via our google accounts into the whatsapp .

PRESENTATION:

* Our project has 2 main components .

1.Sidebar component

2. Chat component

* Sidebar Component

It is mainly divided into 3 parts i.e Sidebar header , Sidebar search container

and SIdebar Chat.

* Sidebar Header

It consists of Avatar and Icons such as DonutLargeIcon , ChatIcon and MoreVertIcon .

* Sidebar Search Container

It consists of a search Icon and a text box .

* Sidebar Chat

It has an Add New chat component via which we can add new chat groups .

It has a list of chat rooms which we have added.

Each chat room consists of an Avatar , group name and last message.

* Chat Component

It is mainly divided into 3 components i.e. Chat Header, Chat Body and Chat Footer.

* Chat Header

It consists of Avatar , Chat room name , last seen(date and time) , Search textbox and a few icons.

Such as SearchOutlined, AttachFile and MoreVertIcon .

* Chat Body

It consists of sent and received Chat Messages in different colors with timestamp and Chat name.

* Chat Footer

It consists of Icons and Message textbox.

In Icons, we have Emoticon Icon and Mic Icon.

SERVICE LAYER:

* As mentioned above,we have 2 components , each consisting of different events.
* When we sign in , we get to see our google account avatar in the web app.
* Whenever we click on add new chat, an event occurs which stores a new chat room name in the firebase and reflects the same in the web app.
* Each group name is inside a link which consists of a unique id which gets stored in the firebase and is easy to retrieve.
* Whenever a chat room is selected from the sidebar , an event occurs and it will be reflected in the chat body dynamically .
* Whenever we send a message , the messages get stored in the firebase and at realtime we get that message on the app body.

DAO LAYER:

* The sign-in information of a single user is stored in the firebase.
* Whenever we add a new chat, it gets stored in the firebase along with the group name and uniquely generated id.
* The typed messages are stored in the firebase along with the information of the sender.
* The messages stored in the firebase can be searched using the search bar in chat header.

**ERRORS WE GOT IN THE PROJECT**

* Localhost 3000 says: the identity provider configuration is disabled, to overcome this we enabled google authentication through firebase.
* While creating new chat rooms,we had to manually feed the link of the display picture for every account avatar : to overcome it we used an online avatar collection from which randomly generated URLs are getting picked without any manual input.
* Initially when we were texting we were not able to connect with other members. The problem was each member was using a different firebase login. : to overcome that we created a common firebase login for all the users.
* Icons getting overlapped in the chat header failed : to overcome this we added padding and aligned the item to center in the chat header field.
* Chat footer not aligned properly : to overcome this we added border as none, outline-width as 0 and margin-left as 10px.

**LEARNINGS DURING THE PROJECT**

1. Planned the whole project using JIRA .
2. Front End development using React
3. CSS Styling for React component and Material UI.
4. React Router for Component routing.
5. Google Authentication and deployment using firebase.
6. Firebase Firestore real time database.
7. Redux (State, Action , Reducer).
8. React Context API .
9. GITHUB essentials like repositories, branches, commits, and Pull Requests.