Initial:

Index.css:

Add rule

\*{

  margin: 0;

}

To make things center align horizontally and vertically:

.app{

  display: grid;

  place-items: center;

  height: 100vh;

}

Width using flex:

.sidebar{

    display: flex;

    flex-direction: column;

    flex: 0.35; /\*sidebar takes 35% of screen\*/

}

How to break down layout:



Icon use as button:

 <IconButton>

                    <DonutLarge />

                  </IconButton>

Automatic space between contents:

Use justify content:

.sidebar\_\_header{

    display: flex;

    justify-content: space-between;

    padding: 20px;

}

Code to make search bar thing:

<div className="sidebar\_\_search">

                    <div className="sidebar\_\_searchContainer">

                      <SearchOutlined/>

                      <input type="text" placeholder="Search or start new chat"/>

                    </div>

            </div>

.sidebar\_\_search{

    display: flex;

    align-items: center;

    background-color: #f6f6f6;

    padding: 10px;

    height: 39px;

}

.sidebar\_\_searchContainer{

    display: flex;

    align-items: center;

    width: 100%;

    height: 35px;

    border-radius: 20px;

}

.sidebar\_\_searchContainer > .MuiSvgIcon-root{

    color: grey;

    padding: 10px;

}

.sidebar\_\_searchContainer > input{

    border: none;

    margin-left: 10px;

    outline-width: 0;

}

To take full space:

Use flex: 1

For scroll:

Overflow: scroll

Simple card:



        <div className="sidebarChat">

            <Avatar/>

            <div className="sidebarChat\_\_info">

                <h2>Room name</h2>

                <p>This is the last room</p>

            </div>

        </div>

.sidebarChat{

    display:flex;

    padding: 20px;

    cursor: pointer;

    border-bottom: 1px solid #f6f6f6;

}

.sidebarChat:hover{

    background-color: #ebebeb;

}

.sidebar\_\_chats{

    flex:1;

    background-color: white;

    overflow: scroll;

}

.sidebarChat\_\_info{

    margin-left: 15px;

}

.sidebarChat\_\_info > h2{

    font-size: 16px;

    margin-bottom: 8px;

}

To make content full width as possible:

Use flex 1 (to take all possible vertical width)

Example:



.chat\_\_headerInfo{

    flex: 1;

    padding-left: 20px;

}

More than One class:

<p className="chat\_\_message chat\_\_reciever">

Use form where enter is required:



            <div className="chat\_\_footer">

                <InsertEmoticon/>

                <form>

                    <input placeholder="Type a message" type="text"/>

                    <button type="submit">Send a message</button>

                </form>

                <MicNone/>

            </div>

In css, as we only need enter functionality and don’t need to show button, so we hide it

.chat\_\_footer {

    display: flex;

    justify-content: space-between;

    align-items: center;

    height: 60px;

    border-top: 1px solid lightgray;

}

.chat\_\_footer > form {

    flex: 1;

    display: flex;

}

.chat\_\_footer > form > input {

    flex: 1;

    border-radius: 30px;

    padding: 10px;

    border: none;

}

.chat\_\_footer > form > button {

    display: none;

}

Material Ui Icon class:

.sidebar\_\_searchContainer > .MuiSvgIcon-root

MongoDb backend:

Separate folder for backend

Npm init (entry point -> server.js)

Query Selector:



Code:

div.about\_\_text::before{

    content: "<div>";

    color:#515152;

    font-weight: normal;

    font-family: 'La Belle Aurore', cursive;

    font-size: 18px;

    margin-left: -2%;

    z-index: 100;

    line-height: 0px;

}

div.about\_\_text::after{

    content: "</div>";

    color:#515152;

    font-weight: normal;

    font-family: 'La Belle Aurore', cursive;

    font-size: 18px;

    margin-left: -2%;

}

.about\_\_text > h2::before{

    content: "<h2>";

    margin-left: -2%;

    color:#515152;

    font-size: 16px;

    font-weight: normal;

    font-family: 'La Belle Aurore', cursive;

    font-size: 18px;

}

.about\_\_text > h2::after{

    content: "</h2>";

    margin-left: -2%;

    color:#515152;

    font-size: 16px;

    font-weight: normal;

    font-family: 'La Belle Aurore', cursive;

    font-size: 18px;

}

.about\_\_text > p::before{

    content: "<p>";

    margin-left: -2%;

    line-height: 30px;

    color: #515152;

    font-family: 'La Belle Aurore', cursive;

    font-size: 18px;

}

.about\_\_text > p::after{

    content: "</p>";

    margin-left: -2%;

    line-height: 30px;

    color: #515152;

    font-family: 'La Belle Aurore', cursive;

    font-size: 18px;

}

Select Element of Particular Class:

div.about\_\_text{

    content: "<div>";

    color:#515152;

    font-weight: normal;

    font-family: 'La Belle Aurore', cursive;

    font-size: 18px;

    margin-left: -2%;

    z-index: 100;

    line-height: 0px;

}

Selecting div of class about\_\_text

Button:

import { Link } from 'react-router-dom';

                        <Link to="contact">

                            <button id="btn">

                                Contact Us

                            </button>

                        </Link>

Whatsapp mern backend:

In backend folder

Npm init

In package.json -> update it by adding start line in under scripts dict

  "scripts": {

    "test": "echo \"Error: no test specified\" && exit 1",

    "start": "node server.js"

  },

After that, we can either install node modules

Npm install

Or we can directly install dependencies which also install node modules

npm i express mongoose

Then create server.js file

MongoDb:

Reference link:

[Get Started with Atlas — MongoDB Atlas](https://docs.atlas.mongodb.com/getting-started/)

It is a no sql db

After that go to mongodb and create new project and free cluster

Then create api

Structure of server.js

//importing

//app config

//middleware

//DB config

//mongodb stuff

//api routes

//listen

Now to do importing like react in server.js file

Add type:module in package.json

{

  "name": "whatsapp-backend",

  "version": "1.0.0",

  "description": "",

  "main": "server.js",

  "type": "module",

  "scripts": {

    "test": "echo \"Error: no test specified\" && exit 1",

    "start": "node server.js"

  },

First dummy check api on some base url or endpoint (/) and get response hello world when status is ok (200) on port 9000

//importing

import express from 'express'

//app config

const app = express()

const port = process.env.PORT || 9000

//middleware

//DB config

//mongodb stuff

//api routes

app.get('/', (req, res)=>res.status(200).send('hello world'))

//listen

app.listen(port, ()=>console.log(`Listening on localhost: ${port}`))

now to run this server

install nodemon

npm I –g nodemon

Then write

nodemon server.js

If everything goes right, then server will listen on port 9000 and cmd will return

[nodemon] 2.0.8

[nodemon] to restart at any time, enter `rs`

[nodemon] watching path(s): \*.\*

[nodemon] watching extensions: js,mjs,json

[nodemon] starting `node server.js`

(node:1592) ExperimentalWarning: The ESM module loader is experimental.

Listening on localhost: 9000

Now to get hello world, go to postmen, and get this url and it will return hello world

<http://localhost:9000/>

Now again go to mongodb

Now create user by going onto sidepanel under database access. Make sure to copy password if it is autogenerated

Then go to network access and allow access from current ip address or otherwise from any where

Now after that click on connect in cluster-> connect your application

Copy provided link and again come back in the application

Now its time to connect to db

It would be like

mongodb+srv://admin:<password>@cluster0.kgp7k.mongodb.net/myFirstDatabase?retryWrites=true&w=majority

Replace password and if required then dbname

import mongoose from 'mongoose'

//DB config

const connection\_url = 'mongodb+srv://admin:WrKNg2Jfc5vUkVLw@cluster0.kgp7k.mongodb.net/myFirstDatabase?retryWrites=true&w=majority'

mongoose.connect(connection\_url,{

    useCreateIndex:true,

    useNewUrlParser:true,

    useUnifiedTopology:true

})

If want to upload image, then

//db config

const mongoURI = 'mongodb+srv://admin:m7igUKWbGeZoQFat@cluster0.yfh06.mongodb.net/myFirstDatabase?retryWrites=true&w=majority'

mongoose.connect(mongoURI,{

    useCreateIndex:true,

    useNewUrlParser:true,

    useUnifiedTopology:true

})

mongoose.connection.once('open', ()=>{

    console.log('db connected')

})

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*all below work for images \*\*\*\*

const conn = mongoose.createConnection(mongoURI, {

    useCreateIndex:true,

    useNewUrlParser:true,

    useUnifiedTopology:true

})

let gfs

conn.once('open', ()=>{

    console.log('db connected')

    gfs = Grid(conn.db, mongoose.mongo)

    gfs.collection('images')

});

const storage = new GridFsStorage({

    url:mongoURI,

    file: (req, file) => {

        return new Promise((resolve, reject)=> {

            {

                const filename = `image-${Date.now()}${path.extname(file.originalname)}`

                const fileInfo = {

                    filename: filename,

                    bucketName: `images`

                }

                resolve(fileInfo)

            }

        })

    }

})

const upload = multer({ storage })

//api routes

app.get('/', (req, res)=>res.status(200).send('hello world'))

//\*\*\*\*\*\*\*\*\*\*\*getting image\*\*\*\*\*\*\*\*\*

app.get('/retrieve/image/single', (req, res)=>{

    gfs.files.findOne({filename: req.query.name }, (err, file)=>{

        if (err) {

            res.status(500).send(err)

        }else {

            if (!file || file.length == 0) {

                res.status(404).json({err: 'file not found'})

            } else{

                const readstream = gfs.createReadStream(file.filename);

                readstream.pipe(res);

            }

        }

    })

})

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* image post \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

app.post('/upload/image', upload.any('file'), (req, res)=>{

    res.status(201).send(req.file)

})

This is all needed to connect to mongodb

Create another dbMessage.js file. In that we will write schema

import mongoose from 'mongoose'

//defining schema --> defining how data will be build

// 1.message

// 2.name

// 3.timestamp

const whatsappSchema = mongoose.Schema({

    message: String,

    name: String,

    timestamp: String,

recieved: Boolean,

})

export default mongoose.model('messageCollection', whatsappSchema)

As we can have different documents or collection in one cluster, so we provide collection name in mongoose.model. Now after schema, come back to server.js and use this collection to send messages

import Messages from 'dbMessage.js'

//middleware

app.use(express.json()) //To convert string to json

//DB config

const connection\_url = 'mongodb+srv://admin:WrKNg2Jfc5vUkVLw@cluster0.kgp7k.mongodb.net/myFirstDatabase?retryWrites=true&w=majority'

mongoose.connect(connection\_url,{

    useCreateIndex:true,

    useNewUrlParser:true,

    useUnifiedTopology:true

})

//mongodb stuff

//api routes

app.get('/', (req, res)=>res.status(200).send('hello world'))

app.post('/app/v1/messages/new', (req, res)=>{

    const dbMessage = req.body

    Messages.create(dbMessage, (err, data)=>{

        if (err){

            res.status(500).send(err)

        } else {

            res.status(201).send(data)

        }

    })

})

Now send message using postman

<http://localhost:9000/app/v1/messages/new>

Post

Body

Json

{

    "message": "Sending first message to mongodb",

    "name": "muneeb",

    "timestamp": "dummy timestamp",

    "recieved": **false**

}

And in response it will send data as we have mentioned in app.post

{

    "\_id": "60dc592991159b32b8899d78",

    "message": "Sending first message to mongodb",

    "name": "muneeb",

    "timestamp": "dummy timestamp",

    "recieved": **false**,

    "\_\_v": 0

}

When testing, always makesure that your server is running by using command nodemon server.js

Imp status response

Getting data or downloading data or getting ok -> 200

Error -> 500

Creating something in db or post somethinf -> 201

Now signup on pusher:

It makes mongodb realtime and we don’t need to refresh our app for latest feed

Frontend send msg to backend, pusher takes msg from backend and trigger frontend with the msg



When creating channel for project

Frontend -> react

Backend -> node.js

After creating, it will give us the node js code

We will put that code in server.js file in app config

Also we need to install pusher

Npm I pusher

To trigger pusher, we will add change stream in db config which will be triggered when any change in observed in mongodb

mongoose.connect(connection\_url,{

    useCreateIndex:true,

    useNewUrlParser:true,

    useUnifiedTopology:true

})

const db = mongoose.connection;

db.once('open', ()=>{

    console.log("DB is connected")

    const msgCollection = db.collection('messagecollections');//same name for collection

    const changeStream = msgCollection.watch();

    changeStream.on("change", (change)=>{

        console.log("A change occured", change)

    })

})

Store connection const db, when once db gets open we got identified

Now store our collection in msgCollection const

And change stream will watch change in msgCollection or in our collection

When any change happens, it will give us in console

Test it by sending msg in postmen, it will console the data in real time in CMD (console)

Now its time to trigger pusher when change occurs

 changeStream.on("change", (change)=>{

        console.log("A change occured", change)

        if (change.operationType == 'insert'){

            const messageDetails = chnage.fullDocument;

            pusher.trigger('messages', 'inserted', {

                name: messageDetails.name,

                message: messageDetails.message

            })

        } else {

            console.log('Error in triggering pusher')

        }

Adding headers to make app able to deploy on heruko

First way

//middleware

app.use(express.json()) //To convert string to json

app.use((req, res, next)=>{

    //headers for heruko

    //As access from anywhere, so no security in it

    res.setHeader("Access-Control-Allow-Origin", "\*"); //req from any end point

    res.setHeader("Access-Control-Allow-Headers", "\*"); //accept headers from everywhere

    next();

})

Second way:

Npm I cors

import cors from 'cors';

//middleware

app.use(express.json()) //To convert string to json

app.use(cors())//headers for heruko

Backend completed:

Now connect pusher to frontend so it triggers frontend when db changes

UseEffect:

It is used to run code inside it once when the app loads

In app.js, from getting started in pusher, paste this code under useEffect

  useEffect(()=>{

    const pusher = new Pusher('1da9a361a566d7dc83bc', {

      cluster: 'ap2'

    });

    const channel = pusher.subscribe('messages');

    channel.bind('inserted', (data)=> {

      alert(JSON.stringify(data));

    });

  }, [])

Install pusher-js in frontend

Npm I pusher-js

And import it

import Pusher from 'pusher-js'

Now when we post api from postman, we get data in form of alert 

Which means our app is sync with the mongodb backend

Create axios.js file where we place our backend url to fetch data or to use backend apis

Axios is used to fetch or to interact frontend with backend apis

import axios from 'axios'

const instance = axios.create({

    baseURL: "http://localhost:9000",

});

export default instance;

When deploy on heruko, we just need to change baseUrl

Coming back to app.js

import './App.css';

import {useEffect, useState} from 'react'

import Chat from './components/chat/Chat';

import Sidebar from './components/sidebar/Sidebar';

import Pusher from 'pusher-js'

import axios from './axios'

function App() {

  const [messages,setMessages] = useState([]);

  //useEffect for fetching

  useEffect(()=>{

    axios.get('/messages/sync')

      .then(response=>{

        setMessages(response.data)

      })

  }, [])

 useEffect(()=>{

    const pusher = new Pusher('1da9a361a566d7dc83bc', {

      cluster: 'ap2'

    });

    const channel = pusher.subscribe('messages');

    channel.bind('inserted', (newMessage)=> {

      alert(JSON.stringify(newMessage));

      setMessages([...messages, newMessage])

    });

    return ()=>{

      channel.unbind\_all(); // to unbind so it will no listen to all messages everytime, only listen new message

      channel.unsubscribe();

    };

  }, [messages]) //add message here so it updates with the message

  console.log(messages);

First useEffect to fetch messages from api. Now we need to set and update messages. For that useState is used and we update messages everytime by using setMessages.

Second useEffect is for pusher. Pusher give us the changed data which is an object. So what we do is kept all messages […messages] and also add new message and update using setMessage function

Pass message object to chat component so it can be used after destructuring

<Chat messages={messages}/>

In chat,

function Chat({messages}) {

    const [input, setInput] = useState('');

    const sendMessage = (e) => {

        e.preventDefault(); //avoiding from refresh

    }

Update chat body div as

            <div className="chat\_\_body">

                {messages.map((message) =>(

                    <p className={`chat\_\_message ${message.recieved && "chat\_\_reciever"}`}>

                        <span className="chat\_\_name">{message.name}</span>

                        {message.message}

                        <span className="chat\_\_timestamp">

                            {message.timestamp }

                        </span>

                    </p>

                ))}

            </div>

Now to post message to api and keep track of send message and input field:

 const [input, setInput] = useState('');

    const sendMessage = async (e) => {

        e.preventDefault(); //avoiding from refresh

    await axios.post('/messages/sync',{

        "message": input,

        "name": "muneeb",

        "timestamp": "Just now!",

        "recieved": true,

    });

    setInput('');

    }

            <div className="chat\_\_footer">

                <InsertEmoticon/>

                <form>

                    <input value={input} onChange={e => setInput(e.target.value)}placeholder="Type a message" type="text"/>

                    <button onClick={sendMessage} type="submit">Send a message</button>

                </form>

                <MicNone/>

            </div>

Use of classes based on condition:

 <p className={`chat\_\_message ${message.recieved && "chat\_\_reciever"}`}>

Use chat\_\_message class, if message.recieved is true, then use chat\_\_reciever class

Using two classes:

<p className="chat\_\_message chat\_\_reciever">

Material ui Icon class:

.header\_\_option > .MuiSvgIcon-root{

    color: gray;

}

.header\_\_option:hover > .MuiSvgIcon-root{

    color: #2e81f4;

}

Active class with bem:

                <div className="header\_\_option header\_\_option--active">

                    <HomeIcon fontSize="large"/>

                </div>

.header\_\_option--active > .MuiSvgIcon-root{

    color: #2e81f4;

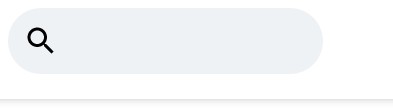
}

.header\_\_option--active{

    border-bottom: 4px solid #2e81f4;

}

Search field:



Code:

                <div className="header\_\_input">

                    <SearchIcon/>

                    <input placeholder="Search Facebook" type="text"/>

                </div>

.header\_\_input{

    display: flex;

    align-items: center;

    background-color: #eff2f5;

    padding: 10px;

    margin-left: 10px;

    border-radius: 999px;

}

.header\_\_input > input{

    outline-width: 0;

    border: none;

    background-color: transparent;

}

React true Condition and component as props:

function Sidebar() {

    return (

        <div className="sidebar">

            <SidebarRow title='Pages'/>

            <SidebarRow title='Friends'/>

            <SidebarRow />

            <SidebarRow />

            <SidebarRow />

            <SidebarRow />

            <SidebarRow />

        </div>

    )

}

We have a sidebar component which use SidebarRow as component and we passed some props to it and use these props in sidebarRow.js. Below is its code

function SidebarRow({title, src, Icon}) {

    return (

        <div className="sidebarRow">

            {src && <Avatar src={src}/>}

            {Icon && <Icon/>}

            {title}

        </div>

    )

}

This is the main thing. Sometimes we need src for avatar and some time we need Icon material ui component, so we destructure all these providing from sidebar.js

Now in first, if src is true then use Avatar component with src

If component is true, then use that Icon component

To pass component as props and use, always make its initial letter capital, like here of Icon

IMAGE IN BACKGROUND OF CARD OR COMPONENT:

function Story({ image, profileSrc, title}) {

    return (

        <div style={{backgroundImage:`url(${image})`}} className="story">

            <Avatar src={profileSrc}/>

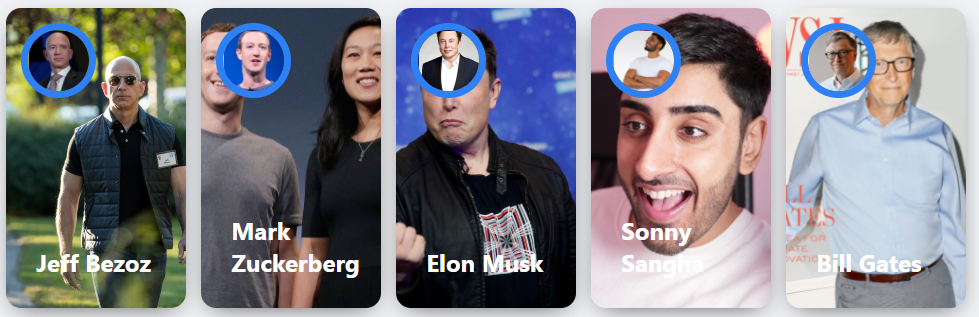
            <h4>{title}</h4>

        </div>

    )

}

Card Design:



import React from 'react'

import './Story.css'

import { Avatar } from '@material-ui/core'

function Story({ image, profileSrc, title}) {

    return (

        <div style={{backgroundImage:`url(${image})`}} className="story">

            <Avatar className="story\_\_avatar" src={profileSrc}/>

            <h4>{title}</h4>

        </div>

    )

}

export default Story

.story{

    position: relative;

    background-position: center center;

    background-size: cover;

    background-repeat: no-repeat;

    width: 100px;

    height: 200px;

    box-shadow: 0px 5px 17px -7px rgba(0,0,0, 0.75);

    border-radius: 10px;

    margin-right: 10px;

    transition: transform 100ms ease-in;

    cursor: pointer;

}

.story:hover{

    transform: scale(1.07);

}

.story\_\_avatar{

    margin: 10px;

    border: 5px solid #2e81f4;

}

.story > h4 {

    position: absolute;

    left: 20px;

    color: white;

    bottom: 20px

}

Calling component with className in CSS:

Example:

<div className="storyReel">

            <Story

                image="https://links.papareact.com/k2j"

                profileSrc="https://links.papareact.com/f0p"

                title="Jeff Bezoz"

            />

Css:

.storyReel\_\_story{

    margin-right: 10px;

}

For middle section when 3 sections:

function Feed() {

    return (

        <div className="feed">

            <StoryReel/>

            {/\* MessageSender \*/}

        </div>

    )

}

.feed{

    flex: 1;

    padding: 30px 150px;

    display: flex;

    flex-direction: column;

    justify-content: center;

    align-items: center;

}

And for left section when 3 sections:

.sidebar{

    flex: 0.33;

    padding: 25px 10px;

}

To hide any tag or content or hide button in form:

Sometimes we only need form input field without button, in that case

<div className="messageSender\_\_top">

                <Avatar/>

                <form>

                    <input className="messageSender\_\_input" placeholder="What's on your mind?"/>

                    <input placeholder="image URL (Optional)"/>

                    <button onClick={handleSubmit} type="submit">Hidden Submit</button>

                </form>

            </div>

.messageSender\_\_top > form > button{

    display: none;

}

After adding button in form, we hide it using css

TRUE FALSE CONDITION IN REACT OR AUTH:

function App() {

  const user = "muneeb"

    return (

    <div className="app">

      {!user ? (

        <h1>Login</h1>

      ):(

        <>

        <Header/>

        <div className="app\_\_body">

          <Sidebar/>

          <Feed/>

          <Widgets />

        </div>

        </>

      )}

    </div>

  );

}

Auth page or place item in center:

Styling material ui button:

 <div className="login">

            <div className="login\_\_logo">

                <img src="https://upload.wikimedia.org/wikipedia/commons/thumb/5/51/Facebook\_f\_logo\_%282019%29.svg/1200px-Facebook\_f\_logo\_%282019%29.svg.png" alt=""/>

                <img src="https://www.logo.wine/a/logo/Facebook/Facebook-Logo.wine.svg" alt=""/>

            </div>

                <Button type="submit" onClick={signIn}>Sign In</Button>

        </div>

.login > button {

    width: 300px;

    background-color: #2e81f4 !important;

    color: #eff3f5;

    font-weight: 800;

}

.login >button:hover{

    background-color: white;

    color: #2e81f4

}

For firebase authentication and db:

1. For authentication, click on authentication in project and select google and enable it
2. For db, click on firestore, get started and select required settings like test mode enable etc
3. Copy the below code in firebase.js file

import firebase from 'firebase';

const firebaseConfig = {

  apiKey: "AIzaSyBDCe6f-cXkeSXyGFmDecXN\_\_jE3-kUVTo",

  authDomain: "facebook-firebase-fullstack.firebaseapp.com",

  projectId: "facebook-firebase-fullstack",

  storageBucket: "facebook-firebase-fullstack.appspot.com",

  messagingSenderId: "663232030936",

  appId: "1:663232030936:web:7fc4d405d249c18c110fad"

};

//initializing app mandatory

const firebaseApp = firebase.initializeApp(firebaseConfig);

//db stuff of firebase

const db = firebaseApp.firestore();

//firebase authentication

const auth = firebase.auth();

const provider = new firebase.auth.GoogleAuthProvider()

export {auth, provider};

export default db;

1. Come to login page. In that, on login button, make sure to add button with onclick having sign in function. In that sign in function, use this function

    const signIn = () => {

        auth

        .signInWithPopup(provider)

        .then((result)=>{

            console.log(result)

        })

        .catch((error)=>alert(error.message))

    };

Here is the complete login page if needed

import { Button } from '@material-ui/core'

import React from 'react'

import './Login.css'

import {auth, provider} from '../../firebase';

function Login() {

    const signIn = () => {

        auth

        .signInWithPopup(provider)

        .then((result)=>{

            console.log(result)

        })

        .catch((error)=>alert(error.message))

    };

    return (

        <div className="login">

            <div className="login\_\_logo">

                <img src="https://upload.wikimedia.org/wikipedia/commons/thumb/5/51/Facebook\_f\_logo\_%282019%29.svg/1200px-Facebook\_f\_logo\_%282019%29.svg.png" alt=""/>

                <img src="https://www.logo.wine/a/logo/Facebook/Facebook-Logo.wine.svg" alt=""/>

            </div>

                <Button type="submit" onClick={signIn}>Sign In</Button>

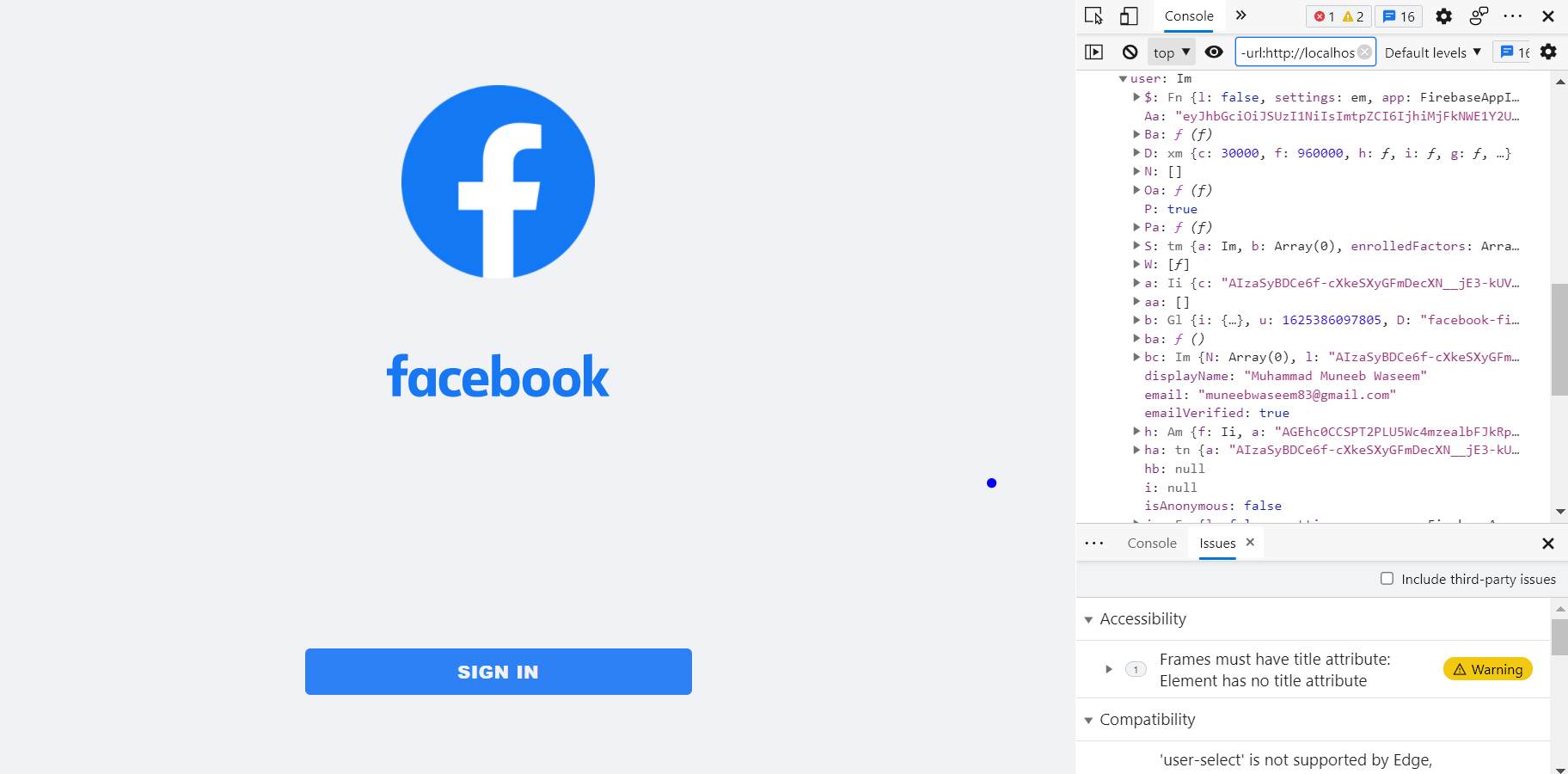
        </div>

    )

}

export default Login

Some info:



When clicking the sign in and selecting the id, it shows details of user in console, not to make it in use, we need to use context api

1. Now to circulate that information in all parent components and their child, context api will come in action. It consist of provider and consumer. Provider is used to provide value to context api component and then usecontext is use to extract that information from context api and able to use it in child components. Remember, place all required all relevant components or parent components under context api provider so that all of their child and child of child can consume that value. And reducer will be used for storing the info

More info: [useState-Context-Reducer/App.js at master · MUHAMMAD-MUNEEB-WASEEM/useState-Context-Reducer (github.com)](https://github.com/MUHAMMAD-MUNEEB-WASEEM/useState-Context-Reducer/blob/master/src/App.js)

1. Now create StateProvider folder, in that create two files stateProvider.js containing context api and reducer.js. They have code of pattern, paste that pattern and wrap whole app in index.js under the state provider

Code for stateprovider

import React, { createContext, useContext, useReducer } from 'react'

export const StateContext = createContext()

export const StateProvider = ({ reducer, initialState, children }) => (

    <StateContext.Provider value={useReducer(reducer, initialState)}>

        {children}

    </StateContext.Provider>

)

export const useStateValue = () => useContext(StateContext)

Code for reducer.js

export const initialState = {

    user: null,

}

export const actionTypes = {

    SET\_USER: 'SET\_USER'

}

const reducer = (state, action) => {

    console.log(action)

    switch (action.type) {

        case actionTypes.SET\_USER:

            return {

                ...state,

                user: action.user

            }

        default:

            return state

    }

}

export default reducer

Wrapping whole app index:

import React from 'react';

import ReactDOM from 'react-dom';

import './index.css';

import App from './App';

import reportWebVitals from './reportWebVitals';

import { StateProvider } from './components/StateProvider/StateProvider';

import reducer, { initialState } from './components/StateProvider/Reducer';

ReactDOM.render(

  <React.StrictMode>

  <StateProvider initialState={initialState} reducer={reducer}>

    <App />

  </StateProvider>

  </React.StrictMode>,

  document.getElementById('root')

);

// If you want to start measuring performance in your app, pass a function

// to log results (for example: reportWebVitals(console.log))

// or send to an analytics endpoint. Learn more: https://bit.ly/CRA-vitals

reportWebVitals();

Now to store data in data layer or reducer store, we use dispatch and passed required user information to it. Again go back to login.js and update code as follows

 const [state, dispatch] = useStateValue();

const signIn = () => {

        auth

        .signInWithPopup(provider)

        .then((result)=>{

            dispatch({

                type: actionTypes.SET\_USER,

                user: result.user

            })

        })

        .catch((error)=>alert(error.message))

    };

What does it do is if action type is SET\_USER, then it will run its corresponding case, and pass user information which we are getting and store it in data layer or store. Now we can use this Information using useContext api in app.js which we have store in useStateValue variable in StateProvider.js

const [{user}, dispatch] = useStateValue();

In this, we are destructuring user from state which stored in data layer and thus our sign in will work now. Now we just need to pass some required user information in our headers sidebar or where we need.

const [{user}, dispatch] = useStateValue();

The above is the most imp line, where we want to use data from data layer using context api, we use this line of code. And then take data from it. Like example of header.js;

const [{user}, dispatch] = useStateValue()

 <div className="header\_\_info">

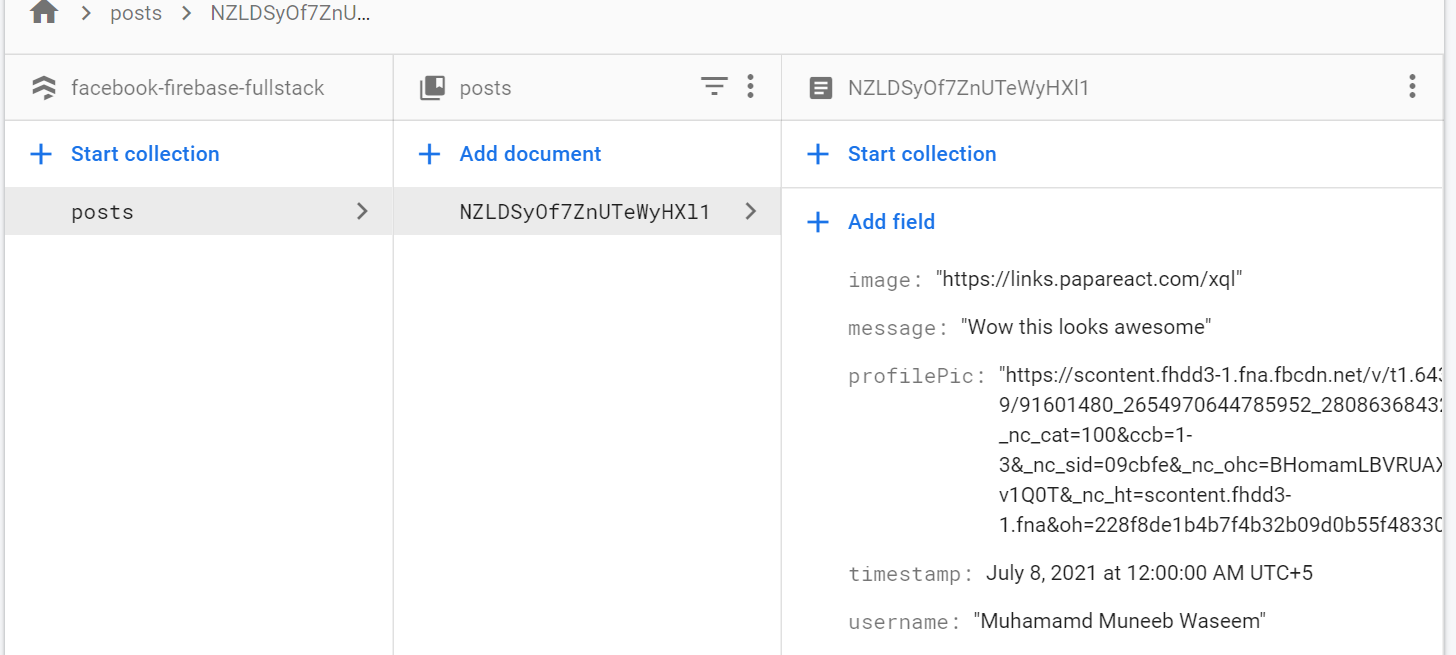
                    <Avatar src={user.photoURL}/>

                    <h4>{user.displayName}</h4>

                </div>

FIRBASE db:

1. firebase.js as done above
2. Now to get the data. First create collection with some name and store data in keys that you required. For example



1. Now after that come back to your application and go to that component where you want to get the data, and use useState which have const to use this data and function to update the data.

Code:

import db from '../../firebase';

import { useEffect } from 'react'

function Feed() {

    const [posts, setPosts] = useState([]);

     useEffect(()=>{

        db.collection('posts').orderBy('timestamp', 'desc').onSnapshot(snapshot => {

            setPosts(snapshot.docs.map(doc => ({ id:doc.id, data: doc.data() })))

        })

    }, [])

    return (

        <div className="feed">

            <StoryReel/>

            <MessageSender/>

        {posts.map((post) => (

            <Post

            key={post.id}

            username={post.data.username}

            message={post.data.message}

            timestamp={post.data.timestamp}

            image={post.data.image}

            profilePic={post.data.profilePic}

            />

        ))}

1. The above code for get always remain same, you just need to change collection name and and properties like username etc as per your requirement
2. Now this point 5 is not imp, I am just showing Post component where we are using these values

function Post({ profilePic, image, username, timestamp, message }) {

    return (

        <div className="post">

            <div className="post\_\_top">

                <Avatar src={profilePic} className="post\_\_avatar"/>

                <div className="post\_\_topInfo">

                    <h3>{username}</h3>

                    <p>{new Date(timestamp?.toDate()).toUTCString()}</p>

                </div>

            </div>

            <div className="post\_\_bottom">

                <p>{message}</p>

            </div>

            <div className="post\_\_image">

                <img src={image} />

            </div>

Remember code for date, it will be always like this. This get code for firebase is available in facebook-firebase-fullstack repo, in feed and post component

DATE for FIREBASE:

                <div className="post\_\_topInfo">

                    <h3>{username}</h3>

                    <p>{new Date(timestamp?.toDate()).toUTCString()}</p>

                </div>

1. Now to post data to firebase, just add this snippet with required properties in the relevant component

import db from '../../../firebase';

import firebase from 'firebase'

function MessageSender() {

    const [input, setInput] = useState('')

    const [imageUrl, setImageUrl] = useState('')

    const [{user}, dispatch] = useStateValue()

    const handleSubmit = e => {

        e.preventDefault();

        db.collection('posts').add({

            message: input,

            timestamp: firebase.firestore.FieldValue.serverTimestamp(),

            profilePic: user.photoURL,

            username: user.displayName,

            image: imageUrl

        })

        setInput('');

        setImageUrl('');

    }

    return (

        <div className="messageSender">

            <div className="messageSender\_\_top">

                <Avatar src={user.photoURL}/>

                <form>

                    <input value={input} onChange={(e) => {setInput(e.target.value)}} className="messageSender\_\_input" placeholder={`What's on your mind, ${user.displayName}`}/>

                    <input value={imageUrl} onChange={(e) => {setImageUrl(e.target.value)}} placeholder="image URL (Optional)"/>

                    <button onClick={handleSubmit} type="submit">Hidden Submit</button>

                </form>

            </div>

That’s it.

FIREBASE DEPLOYMENT

* Firebase login (where hosting exist)
* Firbase init
* Ready for deployment: Y
* Hosting
* Existing project
* Public directory: build
* Single page app: Yes
* Automatic: No
* Now write: npm run build or yarn build
* Firebase deploy

Facebook mern backend:

Npm init

Npm install

Npm i mongoose express cors multer multer-gridfs-storage@4.2.0 gridfs-stream body-parser path pusher

About library: multer is used to extract gridfs, gridfs is used to store images in storage. If no images, then no need to download multer, gridfs etx

//importing stuff

import express from 'express';

import mongoose from 'mongoose';

import Pusher from 'pusher';

import cors from 'cors';

import path from 'path';

import Grid from 'gridfs-stream';

import multer from 'multer';

import GridFsStorage from 'multer-gridfs-storage'

import bodyParser from 'body-parser';

import mongoPosts from './mongoPosts';

Grid.mongo = mongoose.mongo

// app config

const app = express();

const port = process.env.PORT || 9000;

//middlewares

app.use(express.json()) //To convert string to json

app.use(cors())//headers for heruko

//db config

const mongoURI = 'mongodb+srv://admin:m7igUKWbGeZoQFat@cluster0.yfh06.mongodb.net/myFirstDatabase?retryWrites=true&w=majority'

mongoose.connect(mongoURI,{

    useCreateIndex:true,

    useNewUrlParser:true,

    useUnifiedTopology:true

})

mongoose.connection.once('open', ()=>{

    console.log('db connected')

})

// \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*all below work for images \*\*\*\*

const conn = mongoose.createConnection(mongoURI, {

    useCreateIndex:true,

    useNewUrlParser:true,

    useUnifiedTopology:true

})

let gfs

conn.once('open', ()=>{

    console.log('db connected')

    gfs = Grid(conn.db, mongoose.mongo)

    gfs.collection('images')

});

const storage = new GridFsStorage({

    url:mongoURI,

    file: (req, file) => {

        return new Promise((resolve, reject)=> {

            {

                const filename = `image-${Date.now()}${path.extname(file.originalname)}`

                const fileInfo = {

                    filename: filename,

                    bucketName: `images`

                }

                resolve(fileInfo)

            }

        })

    }

})

const upload = multer({ storage })

//api routes

app.get('/', (req, res)=>res.status(200).send('hello world'))

//\*\*\*\*\*\*\*\*\*\*\*get and post image\*\*\*\*\*\*\*\*\*

app.get('/retrieve/image/single', (req, res)=>{

    gfs.files.findOne({filename: req.query.name }, (err, file)=>{

        if (err) {

            res.status(500).send(err)

        }else {

            if (!file || file.length == 0) {

                res.status(404).json({err: 'file not found'})

            } else{

                const readstream = gfs.createReadStream(file.filename);

                readstream.pipe(res);

            }

        }

    })

})

app.post('/upload/image', upload.any('file'), (req, res)=>{

    res.status(201).send(req.file)

})

//\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* get and post data \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

app.get('/retrieve/posts', (req,res)=>{

    mongoPosts.find((err,data)=>{

        if (err){

            res.status(500).send(err)

        }else {

            data.sor((b,a)=>{

                return a.timestamp-b.timestamp

            });

            res.status(200).send(data)

        }

    })

})

app.post('/upload/post', (req, res)=>{

    const dbPost = req.body

    console.log(dbPost)

    mongoPosts.create(dbPost, (err, data)=>{

        if (err) {

            res.status(500).send(err)

        }else {

            res.status(201).send(data)

        }

    })

})

//listener

app.listen(port, console.log(`listening on localhost: ${port}`));

This is the schema with name mongoPost.js

import mongoose  from "mongoose";

const postModel = mongoose.Schema({

    user: String,

    imgName: String,

    text: String,

    avatar: String,

    timestamp: String

})

export default mongoose.model('posts', postModel);

Now connect to frontend:

Install dependencies:

Yarn add pusher-js axios form-data

Update in post.js to retrieve corresponding post image

            {

                imgName ? (

                    <div className="post\_\_image">

                        <img src={`/retrieve/images/single?name=${imgName}`} />

                    </div>

                ) : (

                        console.log('DEBUG >>> no image here')

                    )

            }

Now to get data in feed.js

function Feed() {

    const [profilePic, setProfilePic] = useState('')

    const [postsData, setPostsData] = useState([])

    const syncFeed = () => {

        axios.get('/retreive/posts')

            .then((res)=>{

                console.log(res.data)

                setPostsData(res.data)

            })

    };

    useEffect(()=>{

        syncFeed()

    }, [])

    return (

        <div className="feed">

            <StoryReel/>

            <MessageSender/>

        {postsData.map((entry) => (

            <Post

            profilePic={entry.avatar}

            message={entry.text}

            timestamp={entry.timestamp}

            imgName={entry.imgName}

            username={entry.user}

            />

        ))}

Now to post data along with image in messageSender.js

Backend deployment on heroku:

First create project on heroku

Then come to backend folder

heroku login

git init

heroku git:clone -a facebook-backend-mern-muneeb

The above link will be changed as per project name

git add .

git commit -am "make it better"

git push heroku master

Calling same level tags:

        <div className="dummy">

                <h1 className="heading">Dummy</h1>

                <div className="image">

                    <img  src="https://scontent.fkhi11-1.fna.fbcdn.net/v/t1.18169-9/21751306\_10155724905022838\_7192191338970086519\_n.png?\_nc\_cat=1&amp;ccb=1-3&amp;\_nc\_sid=09cbfe&amp;\_nc\_ohc=IcbUmlfMQ\_4AX8Gd\_cH&amp;\_nc\_ht=scontent.fkhi11-1.fna&amp;oh=476a316551fc8daf192c0acc8392ae30&amp;oe=60E5D3FD"/>

                </div>

        </div>

.dummy > div > img {

    width: 200px;                                                                                                                                                                                                                                                                                                        s

    height: 200px;

    margin-right: 100px;

    visibility: hidden;

}

.dummy > h1:hover ~ div > img{

    visibility: visible;

}

CSS True False property:

backgroundColor:`${isShown1 ? "yellow": "#bf0829"}`

More than 1 true false condition:

 style={{ backgroundColor:`${isShown1 ? "yellow": isShown2 ? "green": "#bf0829"}`}}