Backend -CRUD Perfil, Crear y Eliminar Characteres y Seasons Autenticación, enrutamiento -login logout y Creación de Post

Para iniciar la API back ejecutamos los siguientes pasos:

- 1. `npm init` para crear el paquete.json
- 2.npm i express mongoose passport passport-jwt jsonwebtoken body-parser bcryptjs
 validator

Se descarga los siguientes modulos

- 3. `npm i -D nodemon`
- 4. Se ejecuta el node server.
- 5. En el paquete package.json generado cambiamos "start": "node server.js" por "server": "nodemon server.js"

Conexión a MongoDB con Mongoose

1. Se crea un archivo `keys.js` dentro del directorio `config` y se pega en el URI de MongoDB de **mLab** a keys.js. Ejemplo:

```
""javascript
module.exports = { mongoURI:
"mongodb://username:password@ds117545.mlab.com:17545/react-social-network"};

2. Se agrega dentro del directorio de config: `const mongoose = require("mongoose");` y
`server.js`
//DB Config
const db = require("./config/keys").mongoURI;
```

// Connect to MongoDB thru Mongoose

```
mongoose
.connect(db)
//.then = if it connects successfully
.then(() => console.log("MongoDB Connected"))
//catches if login had error (wrong pw in keys.js or something)
.catch(err => console.log(err));
```

Enrutamiento de archivos con Express Router

Se crean rutas separadas para cada uno de nuestros objetos.

1. Creamos una carpeta llamada router que contendrá cada una de las API.

Ejemplo:

- users.js se encarga de la autenticación (nombre de usuario, correo electrónico, auténtico)
- profile.js(CRUD Perfil, CRUD Personajes, CRUD Temporadas)
- posts.js para publicaciones de personajes más destacados y/ o favoritos y comentarios de usuarios.

```
2. Se agrega en server.js
const users = require("./routes/api/users");
const profile = require("./routes/api/profile");
const posts = require("./routes/api/posts");
3. Se ustilizan las rutas app.use
// Use Routes
app.use('/api/users', users);
app.use('/api/profile', profile);
app.use('/api/posts', posts);
```

```
console.log("Database sucessfully connected!");
  (error) => {
   console.log("Could not connect to database : " + error);
);
//request and response object
app.get('/', (req, res) => res.send('Hello Me'));
//Passport middleware
app.use(passport.initialize());
//Passport Config
require('./config/passport')(passport);
app.use('/api/users', users);
app.use('/api/profile', profile);
app.use('/api/posts', posts);
const port = process.env.PORT | 5000;
//NEW ES6: arrow functions, use backtick `` to add variable with string
app.listen(port, () => console.log(`Server running on port ${port}`));
```

Creación del modelo de usuario: autenticación, tokens web JSON, registro, inicio de sesión

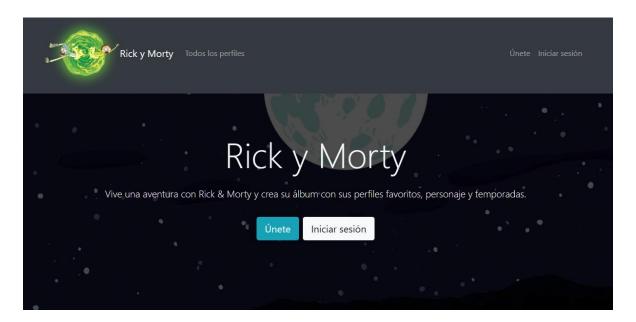
- **1.** Se crea el directorio models para User.js, profile.js y post.js, Los cuales definirán el tipo de variable y/o atributo del objeto
- 2. npm i gravatar para sacar el avatar del correo electrónico.
- 3. Se instala cryptispara hash de contraseña

```
ent > src > utils > Js setAuthToken.js > ...

//import axios to prevent us to manually make sure we have the token
import axios from 'axios';

const setAuthToken = token => {
    if (token) {
        //Apply token to every request
        axios.defaults.headers.common['Authorization'] = token;
    } else {
        //Delete Auth header if token is not there
        delete axios.defaults.headers.common['Authorization'];
};

export default setAuthToken;
```



```
JS authActions.js X
client > src > actions > JS authActions.js > ...
      import axios from 'axios';
       //bring in types
      $\mathscr{get_errors, SET_CURRENT_USER } from './types';
     //import setAuthToken to bring in functionality
     import setAuthToken from '.../utils/setAuthToken';
      //import jwt-decode to decrypt auth token messages to proliferate user profiles
      import jwt_decode from 'jwt-decode';
      export const registerUser = (userData, history) => dispatch => {
       axios
         .post('/api/users/register', userData)
          .then(res => history.push('/login'))
          .catch(err =>
            dispatch({
             type: GET_ERRORS,
             payload: err.response.data
```

```
//Login - Get User Login Token
export const loginUser = userData => dispatch => {
 axios
    .post('/api/users/login', userData)
    .then(res => {
      //Save to local storage
      const token = res.data.token;
      //Set token to local storage (only stores strings, so make sure to convert; but
      localStorage.setItem('jwtToken', token);
      // Set token to Auth header in src/utils/setAuthToken.js
      setAuthToken(token);
      //We want to "set" the user and fill the user object with the token info
      //we need jwt_decode module to do this
      const decoded = jwt_decode(token);
      dispatch(setCurrentUser(decoded));
    //error catcher
    .catch(err =>
      dispatch({
        type: GET_ERRORS,
        payload: err.response.data
      })
```

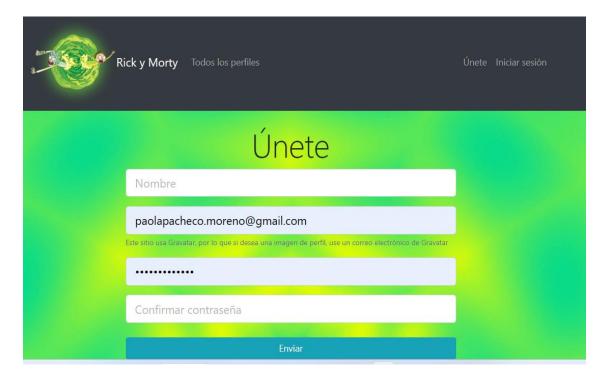
Rick y Morty Todos los perfiles	Únete Iniciar sesión
Inicia sesión Inicie sesión en su cuenta de DevConnector	
paolapacheco.moreno@gmail.com	
Enviar	
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```
//Set logged in user
export const setCurrentUser = decoded => {
    return {
        type: SET_CURRENT_USER,
        payload: decoded
        };
};

//Log user out
export const logoutUser = () => dispatch => {
        //remove token from local storage
        localStorage.removeItem('jwtToken');
        //remove the auth header for future requests
        setAuthToken(false);
        //set the current user to empty object, which will set isauthenticated dispatch(setCurrentUser({}}));
};
```

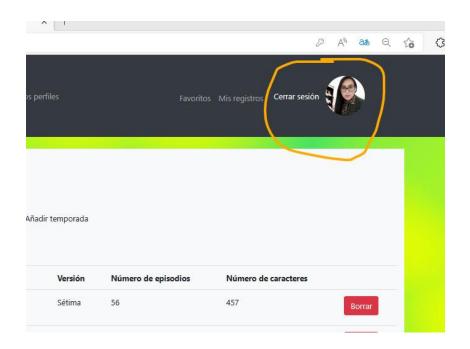
4. Utilizamos el correo electrónico y la contraseña para el inicio de sesión (Tokens)

```
JS passport.js X
config > JS passport.js > ...
      const JwtStrategy = require('passport-jwt').Strategy;
      const ExtractJwt = require('passport-jwt').ExtractJwt;
      const mongoose = require('mongoose');
      const User = mongoose.model('users');
      const keys = require('../config/keys');
      opts.jwtFromRequest = ExtractJwt.fromAuthHeaderAsBearerToken();
 10
      opts.secretOrKey = keys.secretOrKey;
      module.exports = passport => {
        passport.use(
          new JwtStrategy(opts, (jwt_payload, done) => {
            User.findById(jwt_payload.id)
              .then(user => {
                if (user) {
                  return done(null, user);
                return done(null, false);
              .catch(err => console.log(err));
```





Cierre de sesión



```
JS App.js
                                                                  JS Navbar.js • JS profileActions.js
t > src > components > layout > JS Navbar.js > 😭 Navbar > 🕅 onLogoutClick
            My records
                   width="100"
                   height="100"
                onClick={this.onLogoutClick.bind(this)}
                className="btn text-white fw-bold"
                 Logout
              </button>
              className="d-inline-block rounded-circle align-top"
                onClick={this.onLogoutClick.bind(this)}
                src={user.avatar}
                alt={user.name}
                style={{ width: '80px', marginRight: '80px' }}
                title="You must have a Gravatar connected to your email to display an image"
```

```
JS users.js X
routes > api > JS users.js > \bigcirc router.post('/register') callback > \bigcirc then() callback
 22 // @route GET api/users/register
23 // @desc Register user
      router.post('/register', (req, res) => {
        //using destructuring to get the error message from isValid, from register.js
        const { errors, isValid } = validateRegisterInput(req.body);
         if (!isValid) {
         return res.status(400).json(errors);
         //use mongoose to first find if email exists (line 4 Load User Model)
         User.findOne({ email: req.body.email }).then(user => {
          if (user) {
             return res.status(400).json({ email: 'Email already exists' });
             const avatar = gravatar.url(req.body.email, {
              d: 'mm' //default
             const newUser = new User({
              name: req.body.name,
               email: req.body.email,
               avatar,
               password: req.body.password
             bcrypt.genSalt(10, (err, salt) => {
               bcrypt.hash(newUser.password, salt, (err, hash) => {
                 if (err) throw err;
                 newUser.password = hash;
                 newUser
                   .save()
                   .then(user => res.json(user))
                   .catch(err => console.log(err));
```

```
Login User / Returning JWT (token)
router.post('/login', (req, res) => {
 //using destructuring to get the error message from isValid, from register.js
 const { errors, isValid } = validateLoginInput(req.body);
  // Check validation, if not valid, return a 400 error
  if (!isValid) {
   return res.status(400).json(errors);
  const email = req.body.email;
  const password = req.body.password;
  //by using User model
 User.findOne({ email }).then(user => {
   if (!user) {
    return res.status(404).json({ email: 'User not found' });
   bcrypt.compare(password, user.password).then(isMatch => {
     if (isMatch) {
       //if User passed, generate the token
                                                                                   5. Se crea un JSON
```

Webtoken (JWT) para iniciar sesión. Para esto creamos JWT importando dependencias y definiendo jwt.sing para aplicar el token:

```
//If user is good, check password
//use bcrypt to compare pw and hashed
bcrypt.compare(password, user.password).then(isMatch => {
    if (isMatch) {
        //if User passed, generate the token

        //Create JWT payload for next step
        const payload = { id: user.id, name: user.name, avatar: user.avatar };

        //Sign the token takes payload (userinfo), secret (key), expiration (in seconds), callback
        jwt.sign(
        payload,
        keys.secretOrKey,
        { expiresIn: 7200 },

        (err, token) => {
        res.json({
            | success: true,
            | token: 'Bearer' + token
            | });
        } else {
        return res.status(400).json({ password: 'Incorrect Password' });
        }
    });
}
```

const jwt = require("jsonwebtoken");, se declara una clave dentro del directorio config, en la carpeta Key.js : secretOrKey: "secret" y esta a su vez se importa en user.js

```
// @route GET api/users/current
// @desc Return current user (who holds token)
// @access Private
router.get(
'/current',
passport.authenticate('jwt', { session: false }),
(req, res) => {
    res.json({
        id: req.user.id,
            name: req.user.name,
        email: req.user.email
    });
}
module.exports = router;
```

Implementación del Passport para autenticación JWT

Se verifica el token del paso anterior.

1. se incluye el Passport en el server.js

```
server.js
server.js > ...
        console.log("Database sucessfully connected!");
      (error) => {
      console.log("Could not connect to database : " + error);
    //request and response object
    app.get('/', (req, res) => res.send('Hello Me'));
    app.use(passport.initialize());
    //Passport Config
36
    require('./config/passport')(passport);
    app.use('/api/users', users);
    app.use('/api/profile', profile);
    app.use('/api/posts', posts);
    const port = process.env.PORT || 5000;
    //NEW ES6: arrow functions, use backtick `` to add variable with string
    app.listen(port, () => console.log(`Server running on port ${port}`));
ERMINAL
        PROBLEMS
                          DEBUG CONSOLE GITHUB
                                                  GITLENS
ou can now view client in the browser.
Local:
                 http://localhost:3000/
On Your Network: http://192.168.0.3:3000/
ote that the development build is not optimized.
o create a production build, use yarn build.
                                                                                    2. Se
```

actualiza el User.js y el Passport.js con el token JWT

3. Se usa el validator.js en el register.js, para validar los posibles errores y el isempaty.js para comprobar si hay algo vacio. const Validator = require("validator");

```
// gets tested as an empty string
 data.name = !isEmpty(data.name) ? data.name : '';
 data.email = !isEmpty(data.email) ? data.email : '';
 data.password = !isEmpty(data.password) ? data.password : '';
 // the confirm password
 data.password2 = !isEmpty(data.password2) ? data.password2 : '';
 if (!Validator.isLength(data.name, { min: 2, max: 30 })) {
   errors.name = 'Name must be between 2 and 30 profiles';
 if (Validator.isEmpty(data.name)) {
   errors.name = 'Name field is required';
 if (Validator.isEmpty(data.email)) {
   errors.email = 'Email field is required';
 if (!Validator.isEmail(data.email)) {
   errors.email = 'Invalid Email';
 if (Validator.isEmpty(data.password)) {
   errors.password = 'Password field is required';
};
```

Definición de API s Rutas

1. Se instala mongoose y se define dentro de cada uno de los archivos .js de models : Post.js, profile.js y user.js, Es decir se enrutan los modelos de perfil, usuario y post

```
const mongoose = require('mongoose');
const Schema = mongoose.Schema;
```

```
const mongoose = require('mongoose');
const Schema = mongoose.Schema;
//Create Schema
const UserSchema = new Schema({
 //name email password avatar date
  name: {
  type: String,
   required: true
  ጉ.
 email: {
   type: String,
   required: true
  },
  password: {
   type: String,
   required: true
 },
  avatar: {
   type: String,
   required: true
  },
 date: {
   type: Date,
   default: Date.now //current timestamp
```

2. A través del Validator hacemos validaciones para profile.js, charcter.js, season.js, login.js, post.js y register.js, se prueba como una cadena vacía cada una de las variables.

```
orofile.js X
dation > JS profile.js > 🕅 <unknown> > 🕅 validateLoginInput
    module.exports = function validateLoginInput(data) {
     let errors = {};
      // gets tested as an empty string
      data.fullname = !isEmpty(data.fullname) ? data.fullname : '';
      data.telepone = !isEmpty(data.telepone) ? data.telepone : '';
      data.status = !isEmpty(data.status) ? data.status : '';
      data.email = !isEmpty(data.email) ? data.email : '';
      if (!Validator.isLength(data.fullname, { min: 2, max: 40 })) {
       errors.fullname = 'profiles needs to be at least 2 profiles';
      if (Validator.isEmpty(data.city)) {
       errors.city = 'Telepone';
      if (Validator.isEmpty(data.telepone)) {
        errors.telepone = 'Telepone';
      if (Validator.isEmpty(data.email)) {
       errors.email = ' Email';
      return {
        errors,
        isValid: isEmpty(errors)
```

POST

- 1. A través del POST de generan nuevas solicitudes y verificar validaciones.
- 2. Se crean APIs para llevar a cabo la funcionalidad total del programa, esto según los requerimientos funcionales y no funcionales
- 1. api/profile.js

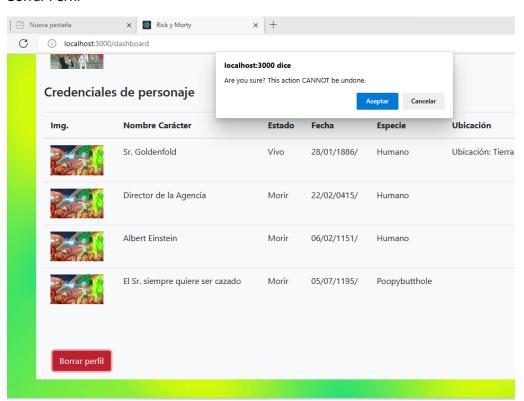
Creación perfil

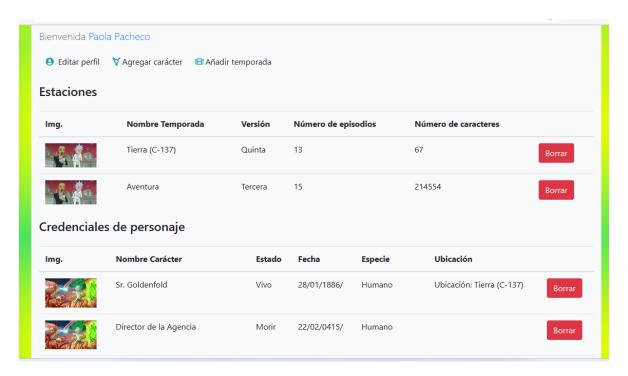
```
pronicijs / 🗘 routeripost(/ ) cani
    Profile.findOne({ user: req.user.id })
      //Used to bring avatar to profile
      .populate('user', ['name', 'avatar'])
      .then(profile => {
       if (!profile) {
          //Create the error
          errors.noprofile = 'There is no profile for this user';
         //Pass it into Json
         return res.status(404).json(errors);
       res.json(profile);
      .catch(err => res.status(404).json(err));
);
// @route POST api/profile
// @desc
// @access Private
router.post('/',
 passport.authenticate('jwt', { session: false }),
  (req, res) => {
   const { errors, isValid } = validateProfileInput(req.body);
   if (!isValid) {
      return res.status(400).json(errors);
    const profileFields = {};
    profileFields.user = req.user.id;
    //check to see if the field we are looking for has been sent it, and then set it
    if (req.body.fullname) profileFields.fullname = req.body.fullname;
    if (req.body.city) profileFields.city = req.body.city;
    if (req.body.email) profileFields.email = req.body.email;
    if (rea body telepone) profileFields telepone = rea body telepone.
```





Borrar Perfil



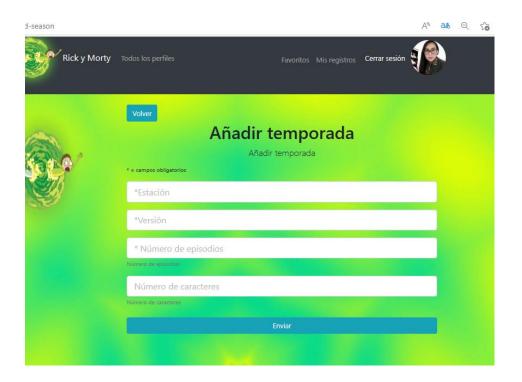


Api para crear Character y Season

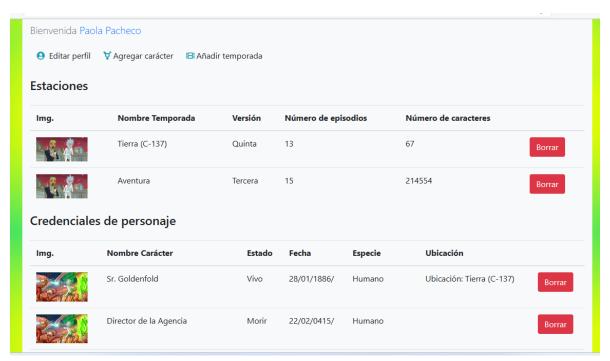
```
Add season to profile
router.post(
 '/season',
  passport.authenticate('jwt', { session: false }),
  (req, res) => {
    const { errors, isValid } = validateSeasonInput(req.body);
   if (!isValid) {
     return res.status(400).json(errors);
    Profile.findOne({ user: req.user.id }).then(profile => {
     const newLoc = {
       nameseason: req.body.nameseason,
       version: req.body.version,
       episodes: req.body.episodes,
       numbercharacters: req.body.numbercharacters,
     //Add to season array
     profile.season.unshift(newLoc);
      //now save existing profile, which returns a promise
     profile.save().then(profile => res.json(profile));
// @route GET api/profile/character
           Add character to profile
router.post(
```

```
Add character to profile
     router.post(
105
       '/character',
       passport.authenticate('jwt', { session: false }),
       (req, res) => {
         const { errors, isValid } = validateCharacterInput(req.body);
         if (!isValid) {
           //Return any error with 400 city
           return res.status(400).json(errors);
         Profile.findOne({ user: req.user.id }).then(profile => {
           const newEdu = {
            namecharacter: req.body.namecharacter,
            status: req.body.status,
             creaciondate: req.body.creaciondate,
             species: req.body.species,
             location: req.body.location,
           profile.character.unshift(newEdu);
           //now save existing profile, which returns a promise
           profile.save().then(profile => res.json(profile));
34
     router.delete(
```

	Agregar carácter Agregar cualquier carácter	
* = campos obligatorios	Agregar cualquier caracter	
*Nombre Caráo	cter	
Nombre Carácter		
*Estado		
Estado		
dd/mm/aaaa		=
Fecha de creación del pers	onaje	
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Ubicación		



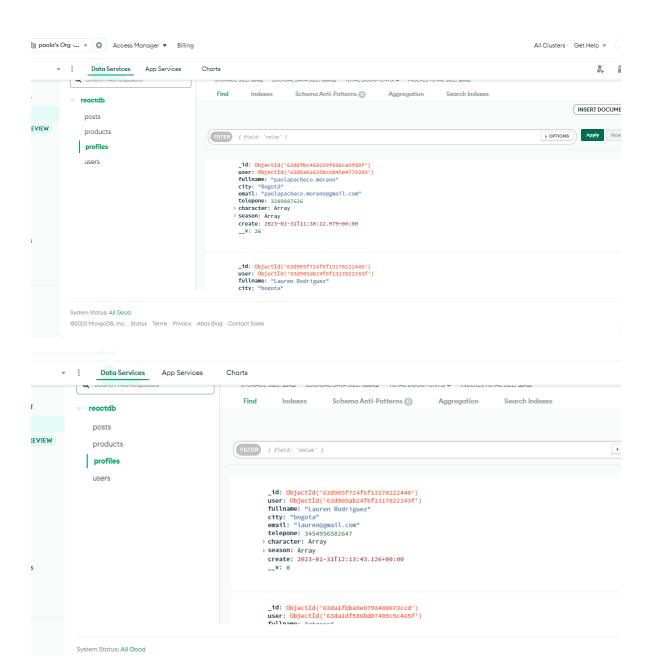
Api que permite borrar el componente de character y Season

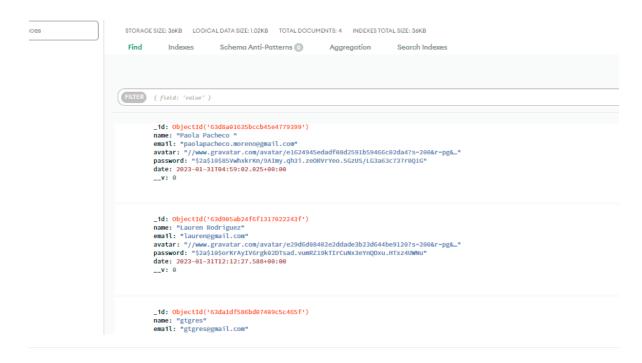


```
DELETE api/profile/season//:exp_id
36
                Delete season from profile
37
38
     router.delete(
39
       '/season/:exp_id',
       passport.authenticate('jwt', { session: false }),
41
       (req, res) => {
42
43
         Profile.findOne({ user: req.user.id }).then(profile => {
45
46
47
           const removeIndex = profile.season
49
             .map(item => item.id)
50
             //gets us the season to delete
51
             .indexOf(req.params.exp_id);
53
           profile.season.splice(removeIndex, 1);
55
57
           profile
58
             .save()
59
             .then(profile => res.json(profile))
61
62
             .catch(err => res.status(404).json(err));
63
         });
65
```

```
Delete character from profile
59
70
    router.delete(
      '/character/:edu_id',
      passport.authenticate('jwt', { session: false }),
      (req, res) => {
        Profile.findOne({ user: req.user.id }).then(profile => {
          //Find the character that we want to delete
          //Get remove index
          //Use indexofmap
          const removeIndex = profile.character
            //turn array ofnamecharacter into id's
            .map(item => item.id)
            //gets us the character to delete
            .indexOf(req.params.edu_id);
          profile.character.splice(removeIndex, 1);
          profile
            .save()
            .then(profile => res.json(profile))
            //Catch
            .catch(err => res.status(404).json(err));
        });
```

Datos almacenados en MongoDB





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DASBOARD

FRONTED-CARPETA CLIENT

Implementando React -

- 1. Se ejecuta create-react-app client para crear la carpeta.
- 2. npm i concurrently
- 3. npm install --prefix client

- 4. npm run dev
- 5. En la carpeta cliente ejecutamos npm i react-router-dom
- 6. npm i react-bootstrap bootstrap
- 7. npm i axios classnames jwt-decode react-redux react-router-dom redux redux-thunk
- 8. se crean los respectivos directorios y archivos tales como:

Components, components/auth, entre otros y un de los archivos más principales como el App.js, que hace el llamado de cada uno de los componentes y el router

9. Configuración de Redux y autenticación

Se utiliza para compartir datos entre los diversos componentes,

Para esto instalamos los siguientes paquetes a la carpeta de Client

- npm i redux react-redux redux-thunk
- 10. Se configura el usuario extrayendo información del token, para esto instalamos jwtcode
 - npm i jwt-decode
 - import jwt_decode from 'jwt-decode'; en authActions

10. Prepare& Deploy

• Finalmente verificamos que las claves del config sean correctas, para que el sistema no genere problemas en la conexión con el backend

```
keys_devs.js
//we do not want to push this file
```

```
module.exports = {
  module.exports = {
    mongoURI:
     "mongodb://username:password@ds117545.mlab.com:17545/react-social-network"
};
```

11. Finalmente ejecutamos en la terminal de client, npm start para ver la ejecución del proyecto en el localhost y a su vez también ejecutamos el backend con nodemon server.js desde la raíz del proyecto.