

# React

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AUTHENTICATION AND AUTHORIZATION

# What to Learn

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JSON Web Tokens

Calling Protected API

Showing/Hiding Elements for certain roles

Protected Routes

# Logging In Fail

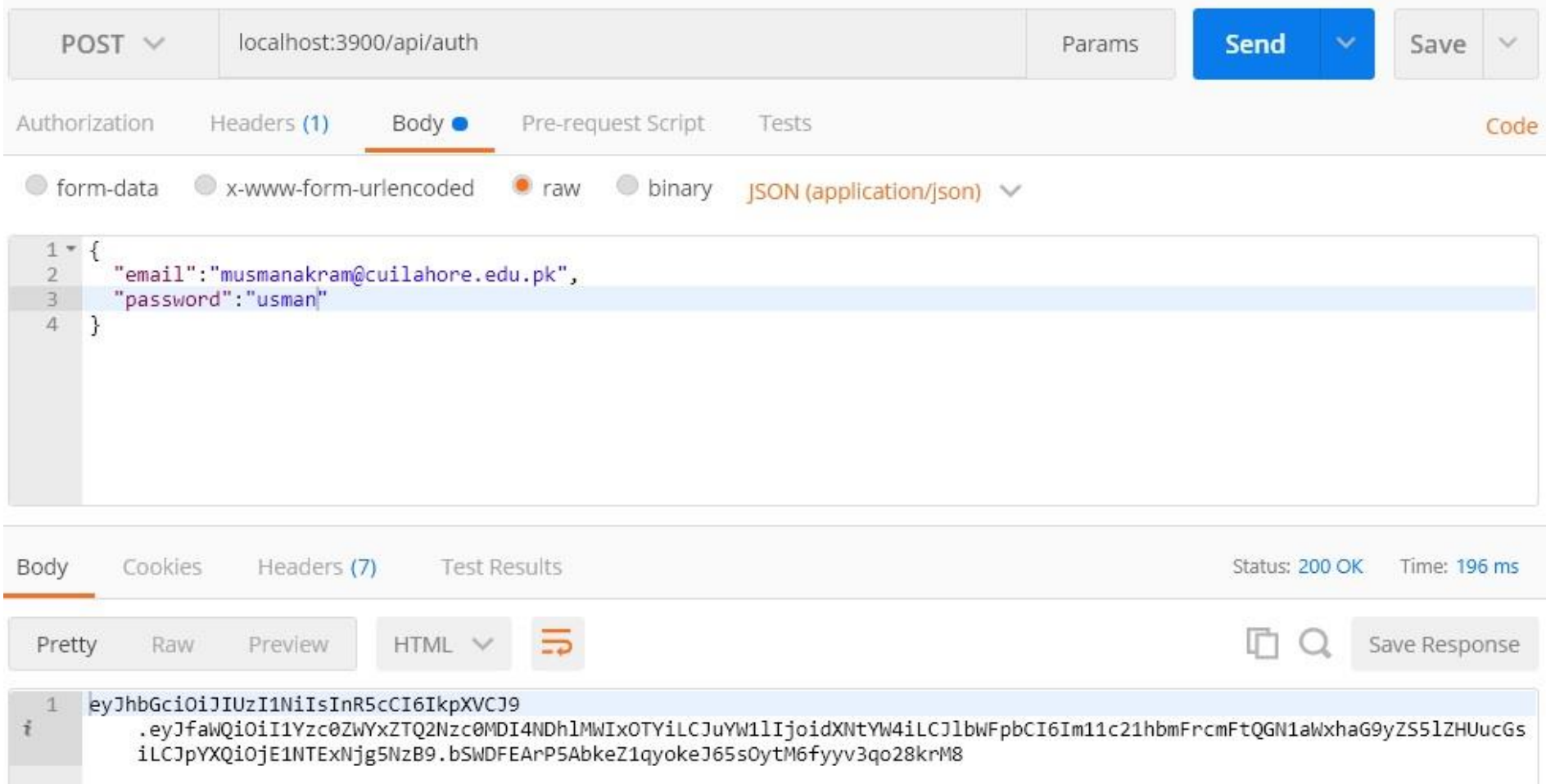
The screenshot shows a REST client interface with the following details:

- Method:** POST
- URL:** localhost:3900/api/auth
- Body Type:** JSON (application/json)
- Body Content:**

```
{
  "email": "musmanakram@cuilahore.edu.pk",
  "password": "usman 1"
}
```
- Status:** 400 Bad Request
- Time:** 195 ms
- Response Content:**

```
1 Invalid email or password.
```

# Logging In Success



# Sending Request with token

localhost:3900/api/movies

POST

localhost:3900/api/movies

Send

Save

Params

Authorization

Headers (2)

Body

Pre-request Script

Tests

Cookies

Code

	KEY	VALUE	DESCRIPTION	...	Bulk Edit	Presets
<input checked="" type="checkbox"/>	Content-Type	application/json				
<input checked="" type="checkbox"/>	x-auth-token	eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJfaWQiOiJlc3R5bGUiLCJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1b290IjoiYm9keSIsImV4cCI6MTY5MjY0MjY0fQ.eyJ1b290IjoiYm9keSIsImV4cCI6MTY5MjY0MjY0fQ				
	Key	Value	Description			

Body

Cookies

Headers (7)

Test Results

Status: 200 OK

Time: 23 ms

Size: 407 B

Download

Pretty

Raw

Preview

JSON

```

1 {
2   "_id": "5c74f8124677402848e1b1cc",
3   "title": "Airplane WOW",
4   "genre": {
5     "_id": "5c749c241c412008b0aade22",
6     "name": "Comedy"
7   },
8   "numberInStock": 5,
9   "dailyRentalRate": 2,
10  "v": 0

```

# Logging in React

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```
export async function login(email, password) {  
  const { data: jwt } = await  
  http.post(apiEndpoint, { email, password });  
  localStorage.setItem(tokenKey, jwt);  
}  
  
//axios to post email and password  
//Rename data (jwt token) to jwt and store in  
//local storage
```

# Login Form Submit

---

```
doSubmit = async () => {  
  try {  
    const { data } = this.state; await auth.login(data.username, data.password);  
    const { state } = this.props.location;  
    window.location = state ? state.from.pathname : "/";  
  } catch (ex) {  
    if (ex.response && ex.response.status === 400) {  
      //Handle Errors  
    }  
  }  
};
```

# Logging in On Registration

## Modify Backend API to send token

---

```
const token = user.generateAuthToken();  
res  
  .header("x-auth-token", token)  
  .header("access-control-expose-headers", "x-auth-token")  
  .send(_.pick(user, ["_id", "name", "email"]));
```





# Logging in On Registration

---

```
const response = await  
userService.register(this.state.data);  
  
localStorage.setItem("token", response.headers["x-auth-  
token"]);  
  
window.location = "/";
```

# Jwt.io

 **JWT**

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```
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJfaWQiOiJlc3R5bW11IjoidXNtYW4iLCJlbWFpbCI6Im11c21hbmFrcmFtQGN1aWxhaG9yZS51ZHUucGsiLCJpYXQiOi0jE1NTE5Njg5NzB9LmSWDFEArP5AbkeZ1qyokeJ65s0ytM6fyyv3qo28krM8
```

```
{
  "alg": "HS256",
  "typ": "JWT"
}
```

PAYLOAD: DATA

```
{
  "_id": "5c74ef1e4677402848e1b196",
  "name": "usman",
  "email": "musmanakram@cuilahore.edu.pk",
  "iat": 1551168970
}
```

VERIFY SIGNATURE

```
HMACSHA256(
  base64UrlEncode(header) + "." +
  base64UrlEncode(payload),
  your-256-bit-secret
) ☐ secret base64 encoded
```

```
import jwtDecode from "jwt-decode";
```

---

```
export function getCurrentUser() {  
  try {  
    const jwt = localStorage.getItem(tokenKey);  
    return jwtDecode(jwt);  
  } catch (ex) {  
    return null;  
  }  
}
```

# Logging Out

---

```
export function logout() {  
  localStorage.removeItem(tokenKey);  
}
```

```
//Nothing to do on server
```

# Calling protected Routes

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```
axios.defaults.headers.common["x-auth-token"] = localStorage.getItem("token");
```

```
//Set x-auth token for each request
```

# Authoization

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Set isAdmin property in db and set it to user object

Use it in React to hide/show components

Something like this

```
const user = auth.getCurrentUser();  
if (user && user.isAdmin)  
this.columns.push(this.deleteColumn);
```