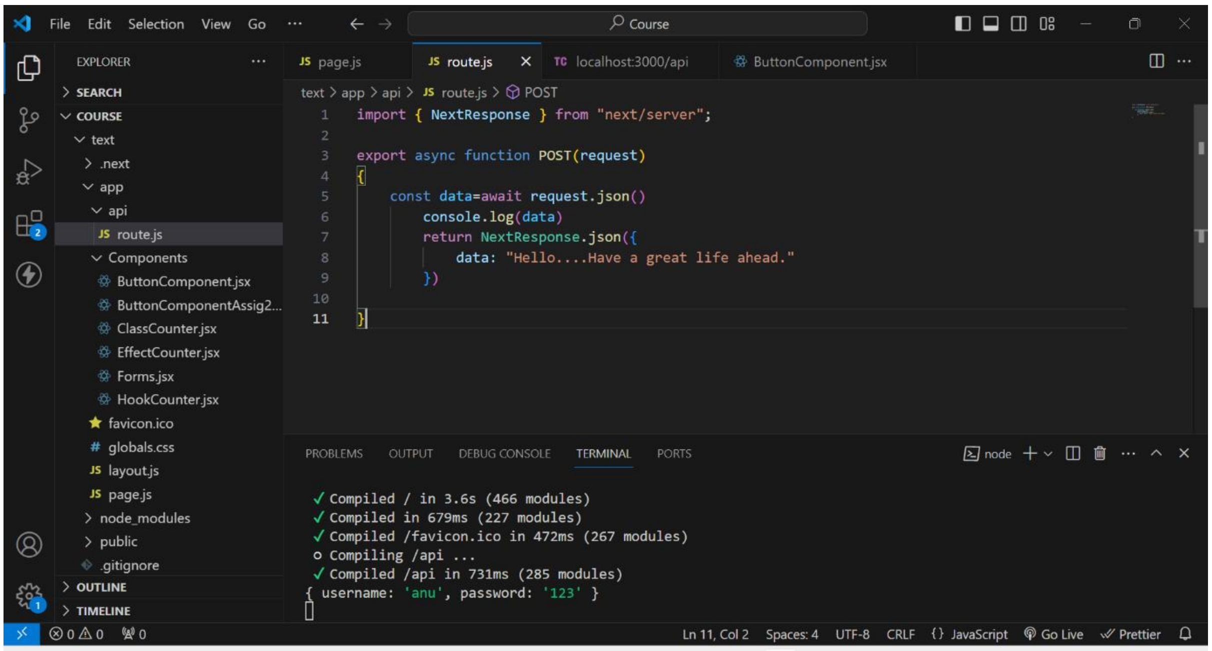
ASSIGNMENT 3- A simple RESTFUL API using React.js, DataBase Creation, and Creating Index

RestFul API code

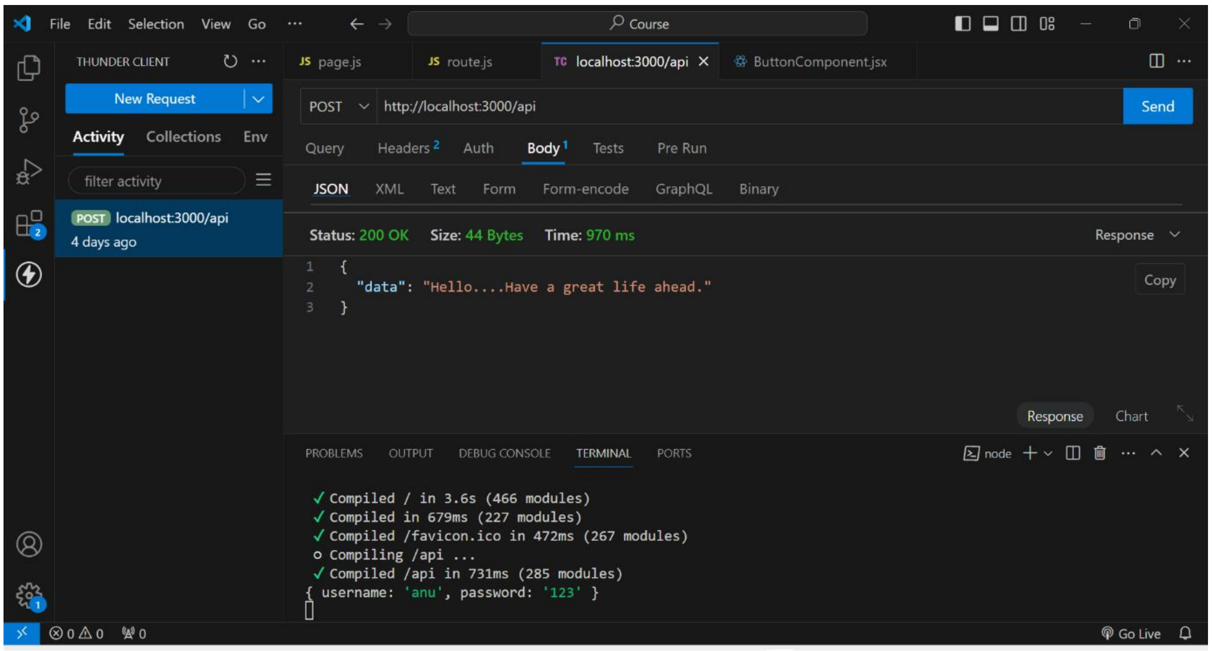


```javascript
import { NextResponse } from "next/server";

export async function POST(request)
{
    const data=await request.json()
        console.log(data)
        return NextResponse.json({
            data: "Hello....Have a great life ahead."
        })

}
```

```
✓ Compiled / in 3.6s (466 modules)
✓ Compiled in 679ms (227 modules)
✓ Compiled /favicon.ico in 472ms (267 modules)
○ Compiling /api ...
✓ Compiled /api in 731ms (285 modules)
{ username: 'anu', password: '123' }
```

Rest Output on ThunderClient

This is the output when we create an API using REST.



POST http://localhost:3000/api

Status: 200 OK Size: 44 Bytes Time: 970 ms

```
{
  "data": "Hello....Have a great life ahead."
}
```

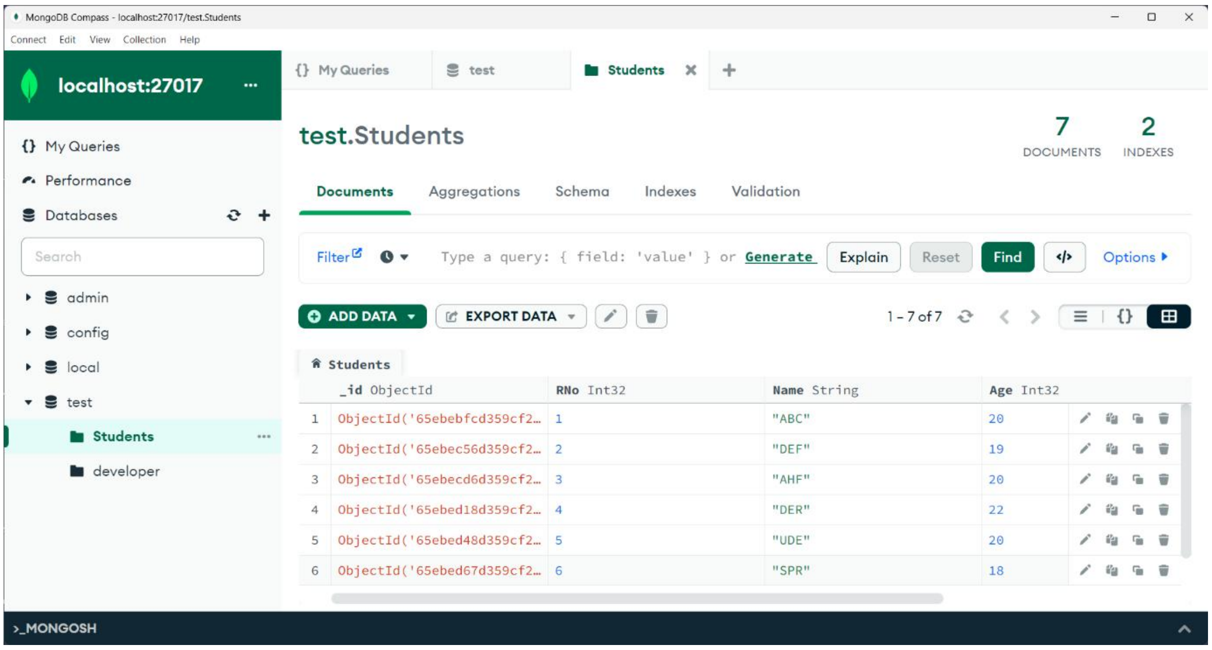
```
✓ Compiled / in 3.6s (466 modules)
✓ Compiled in 679ms (227 modules)
✓ Compiled /favicon.ico in 472ms (267 modules)
○ Compiling /api ...
✓ Compiled /api in 731ms (285 modules)
{ username: 'anu', password: '123' }
```

DataBase Creation

1st we created a database named test

In that test we created a collection named Students

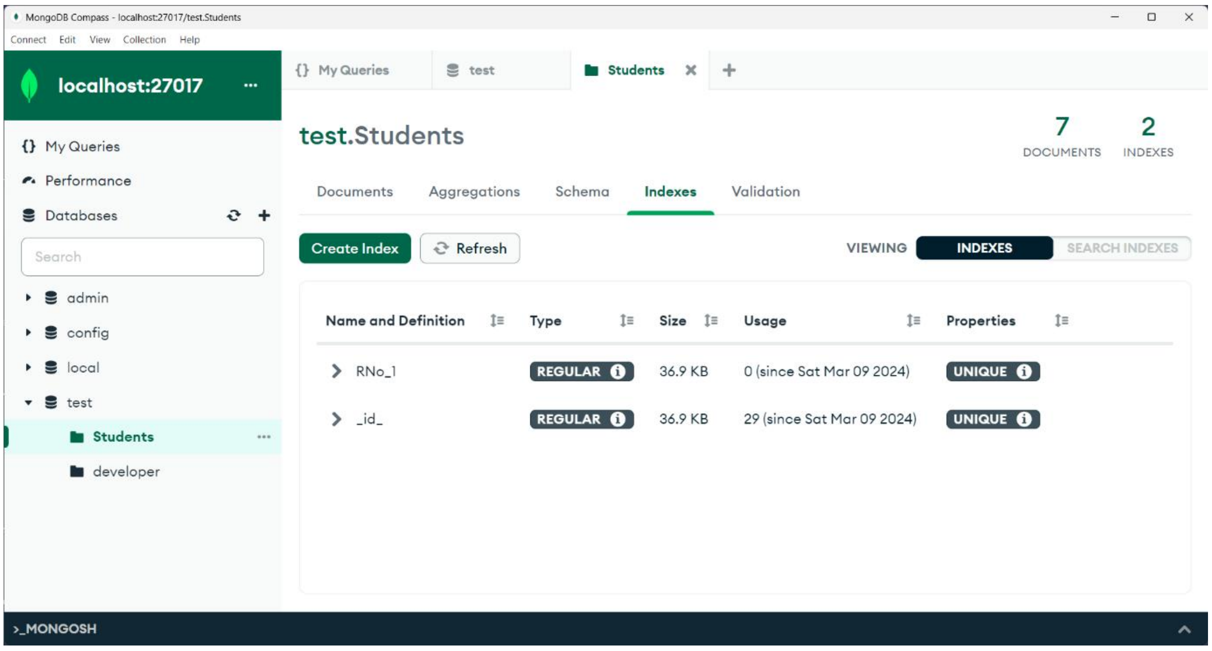
And finally by using ADD DATA , we added data of the students like rno, name, age.


test.Students — 7 DOCUMENTS, 2 INDEXES

	_id ObjectId	RNo Int32	Name String	Age Int32
1	ObjectId('65ebebfcd359cf2…	1	"ABC"	20
2	ObjectId('65ebec56d359cf2…	2	"DEF"	19
3	ObjectId('65ebecd6d359cf2…	3	"AHF"	20
4	ObjectId('65ebed18d359cf2…	4	"DER"	22
5	ObjectId('65ebed48d359cf2…	5	"UDE"	20
6	ObjectId('65ebed67d359cf2…	6	"SPR"	18

Indexing Creation

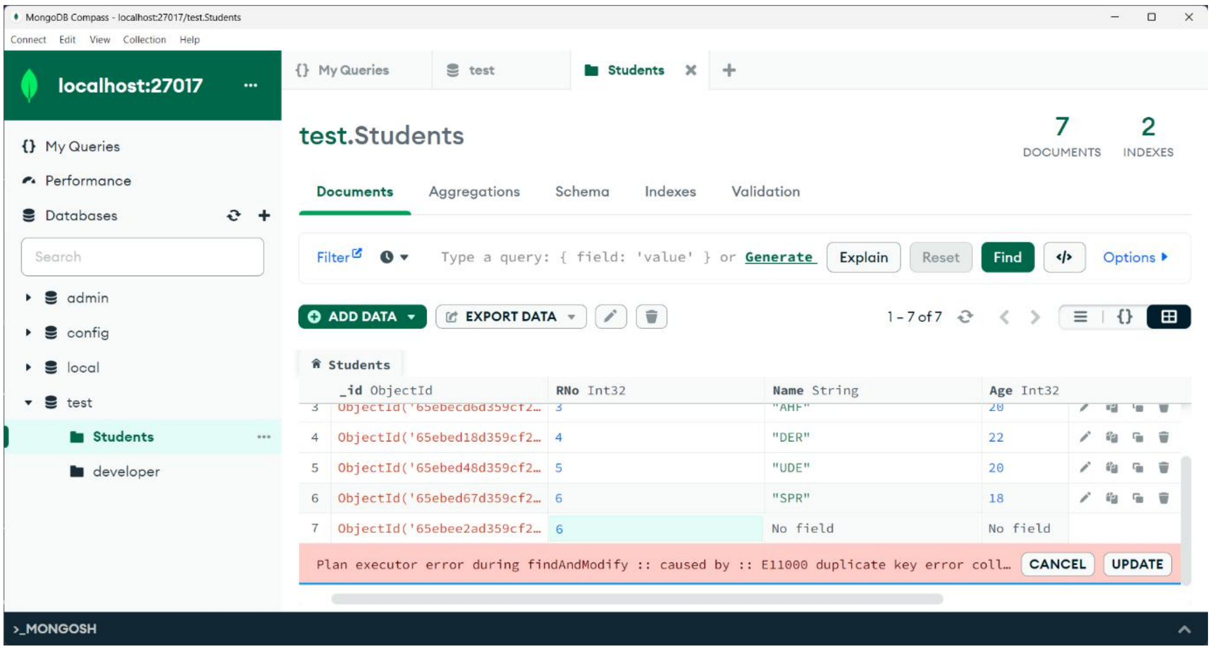
As rno is the unique attribute throug which we identify a student uniquely. So, here I created an index based on Rno. And assigned unique key to it.


test.Students — 7 DOCUMENTS, 2 INDEXES

Name and Definition	Type	Size	Usage	Properties
RNo_1	REGULAR	36.9 KB	0 (since Sat Mar 09 2024)	UNIQUE
_id_	REGULAR	36.9 KB	29 (since Sat Mar 09 2024)	UNIQUE

Indexing usage

As we gave Rno as unique, If we try to insert a duplicate document that is existed it shows an error like..duplicate collection.



	_id ObjectId	RNo Int32	Name String	Age Int32
3	ObjectId('65ebecd6d359cf2…	3	"AHF"	20
4	ObjectId('65ebed18d359cf2…	4	"DER"	22
5	ObjectId('65ebed48d359cf2…	5	"UDE"	20
6	ObjectId('65ebed67d359cf2…	6	"SPR"	18
7	ObjectId('65ebee2ad359cf2…	6	No field	No field

```
Plan executor error during findAndModify :: caused by :: E11000 duplicate key error coll…
```

CANCEL UPDATE