



# Cross Skill



# Target

Creating Crud API's with PostGreSql using Prisma Orm and NestJS



# Content

- Connection setup
- Environment
- User Model
- Create
- Retrieve
- Update
- Delete

# Connection Setup With Prisma

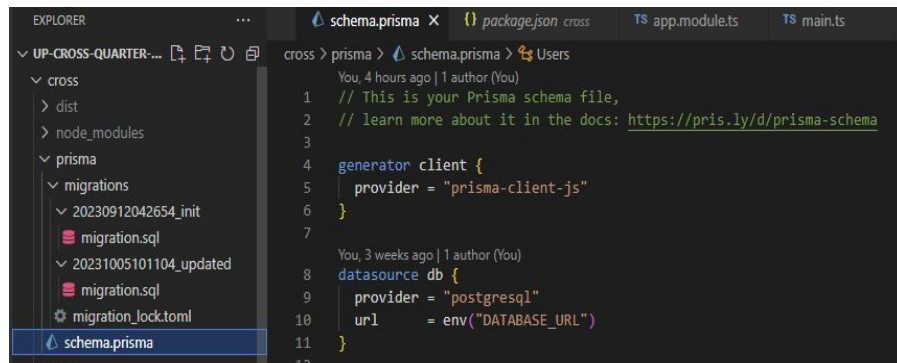
Add prisma and prisma client with the following command::

```
PS D:\up-cross-quarter-1-24\cross> npm install prisma @prisma/client
```

Then initiate prisma with the following:

```
PS D:\up-cross-quarter-1-24\cross> npx prisma init
```

After the command a folder is created named “prisma” and inside it there’s a file, schema.prisma





# Environment

Add database url in the .env file:

```
DATABASE_URL="postgresql://postgres:admin@localhost:5434/users-description?schema=public"
```

Add the model in the schema.prisma file:

```
You, 4 hours ago | 1 author (You)  
model Users {  
  id      Int    @id @default(autoincrement())  
  name    String @db.VarChar(100)  
  bio     String @db.VarChar(255)  
}
```



# Model

```
users.controller.ts × TS users.model.ts × TS users.service.ts schem
oss > src > users > TS users.model.ts > Users
You, 3 days ago | 1 author (You)
1 import { Prisma } from '@prisma/client';
2
You, 3 days ago | 1 author (You)
3 export class Users implements Prisma.UsersCreateInput {
4   name: string;
5   bio: string;
6 }
7
```



# Prisma service and User module

## Prisma service:

```
You, 3 weeks ago | 1 author (You)
import { INestApplication, Injectable, OnModuleInit } from '@nestjs/common';
import { PrismaClient, Prisma } from '@prisma/client';

You, 3 weeks ago | 1 author (You)
@Injectable()
export class PrismaService
  extends PrismaClient<Prisma.PrismaClientOptions, 'beforeExit'>
  implements OnModuleInit
{
  async onModuleInit() {
    await this.$connect();
  }

  async enableShutdownHooks(app: INestApplication) {
    this.$on('beforeExit', async () => {
      await app.close();
    });
  }
}
```

## User module:

```
You, 3 weeks ago | 1 author (You)
import { Module } from '@nestjs/common';
import { UsersController } from './users.controller';
import { UsersService } from './users.service';
import { PrismaService } from 'src/prisma.service';

You, 3 weeks ago | 1 author (You)
@Module({
  controllers: [UsersController],
  providers: [UsersService, PrismaService],
})
export class UsersModule {}
```

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2	3	sss	ssaseee
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```





## Create (Contd.)

```
async createUser(data: Users): Promise<Users> {  
  return this.prisma.users.create({  
    data,  
  });  
}
```

```
@Post()  
async postUser(@Body() postData: Users): Promise<Users> {  
  return this.userService.createUser(postData);  
}
```

You 3 weeks ago • Cross-posted 70%

# Retrieve (All)

User.service:

```
async getAllUser(): Promise<Users[]> {  
  return this.prisma.users.findMany();  
}
```

Users.controller:

```
⚡ @Get()  
async getAllUsers() {  
  @Req() request: Request,  
  @Res() response: Response,  
}: Promise<any> {  
  const result = await this.usersService.getAllUser();  
  return response.status(200).json({  
    status: 'Ok!',  
    message: 'Successfully fetch data!',  
    result: result,  
  });  
}
```

Result:

```
{  
  "status": "Ok!",  
  "message": "Successfully fetch data!",  
  "result": [  
    {  
      "id": 3,  
      "name": "sss",  
      "bio": "ssaseee"  
    },  
    {  
      "id": 1,  
      "name": "sss",  
      "bio": "asaa"  
    },  
    {  
      "id": 4,  
      "name": "safa safa",  
      "bio": "Test test"  
    },  
    {  
      "id": 5,  
      "name": "safa5",  
      "bio": "Test test"  
    }  
  ]  
}
```

# Retrieve Single element

User.service:

```
async getUser(id: number): Promise<Users> {  
  return this.prisma.users.findUnique({ where: { id: Number(id) } });  
}
```

User.controller:

```
@Get('/:id')  
async getUsers(@Param('id') id: number): Promise<Users | null> {  
  return this.usersService.getUser(id);  
}
```

URL:

GET

http://localhost:3000/api/users/1

Result:

```
{  
  "id": 1,  
  "name": "sss",  
  "bio": "asaa"  
}
```

# Update

User.service:

```
async updateUser(id: number, data: Users): Promise<Users> {  
  return this.prisma.users.update({  
    where: { id: Number(id) },  
    data,  
  });  
}
```

You, 3 weeks ago • Cross done 70%

User.controller:

```
@Put('/:id')  
async updateUser(  
  @Param('id') id: number,  
  @Body() data: Users,  
) : Promise<Users> {  
  return this.userService.updateUser(id, data);  
}
```

URL:

PUT

http://localhost:3000/api/users/1

Body:

```
{  
  "name": "sss",  
  "bio": "admin"  
}
```

Result:

```
{  
  "id": 1,  
  "name": "sss",  
  "bio": "admin"  
}
```

# Delete

User.service:

```
async deleteUser(id: number): Promise<Users> {  
  return this.prisma.users.delete({  
    where: { id: Number(id) },  
  });  
}
```

User.controller:

```
@Delete('/:id')  
async deleteUsers(@Param('id') id: number): Promise<Users> {  
  return this.userService.deleteUser(id);  
}
```

Url:

DELETE	▼	http://localhost:3000/api/users/5
--------	---	-----------------------------------

Result:

	id [PK] integer	name character varying (100)	bio character varying (255)
1	1	sss	admin
2	3	sss	ssaseee
3	4	safa safa	Test test



# Up Skill

Session: July- September, 2023

Md. Rashedul Hasan Safa

10482



# Target

Basic of React-redux with redux/toolkit



## What was done?

- Basic Page setup
- Store setup
- Create a postSlice file
- Create
- Retrieve
- Update
- Delete





# Basic setup

First run the cross app

Downloaded skeleton code from:

<https://github.com/trickisprogram/toolkit-crud-api>

The package.json:

```
you, now | 1 author (you)
{
  "name": "toolkit-crud",
  "version": "0.1.0",
  "private": true,
  "dependencies": {
    "@reduxjs/toolkit": "^1.6.2",
    "@testing-library/jest-dom": "^5.14.1",
    "@testing-library/react": "^11.2.7",
    "@testing-library/user-event": "^12.8.3",
    "antd": "^4.16.13",
    "react": "^17.0.2",
    "react-dom": "^17.0.2",
    "react-redux": "^7.2.5",
    "react-router-dom": "^5.3.0",
    "react-scripts": "4.0.3"
  },
  "scripts": {
    "start": "SET NODE_OPTIONS=--openssl-legacy-provider && react-scripts start --port 3001",
    "build": "SET NODE_OPTIONS=--openssl-legacy-provider && react-scripts build",
    "test": "react-scripts test",
    "eject": "react-scripts eject"
  },
  "eslintConfig": {
    "extends": [
      "react-app",
      "react-app/jest"
    ]
  },
  "browserslist": {
    "production": [
      ">0.2%",
      "not dead",
      "not op_mini all"
    ],
    "development": [
      "last 1 chrome version",
      "last 1 firefox version",
      "last 1 safari version"
    ]
  }
}
```



## Setup store

```
You, 1 second ago | 1 author (You)
import React from "react";
import ReactDOM from "react-dom";
import "../index.css";
import App from "../App";
import "antd/dist/antd.css";
import { BrowserRouter } from "react-router-dom";
import { Provider } from "react-redux";
import { configureStore } from "@reduxjs/toolkit";
// import PostReducer from "../feature/postSlice";

const store = configureStore({
  reducer: {
    // app: PostReducer,
  },
});

ReactDOM.render(
  <React.StrictMode>
    <Provider store={store}>
      <BrowserRouter>
        <App />
      </BrowserRouter>
    </Provider>
  </React.StrictMode>,
  document.getElementById("root")
);
```



## Create a postSlice

```
const postSlice = createSlice({  
  name: "post",  
  initialState: {  
    post: [],  
    loading: false,  
    error: null,  
    edit: false,  
    bio: "",  
  },  
});
```

# Retrieve

```
import { createSlice, createAsyncThunk } from "@reduxjs/toolkit";

export const getPost = createAsyncThunk("post/getPost ", async ({ id }) => {
  return fetch(`http://localhost:3000/api/users/${id}`).then((res) =>
    res.json()
  );
});

extraReducers: {
  [getPost.pending]: (state, action) => {
    state.loading = true;
  },
  [getPost.fulfilled]: (state, action) => {
    state.loading = false;
    state.post = [action.payload];
  },
  [getPost.rejected]: (state, action) => {
    state.loading = false;
    state.error = action.payload;
  },
}
```

Understand Redux Toolkit Using API

## Fetch Post

Fetch User Post

Create User Post

User Id: 1

admin



## Retrieve (Contd.)

```
import { useSelector, useDispatch } from "react-redux";
import { getPost, deletePost, setEdit, updatePost } from "../feature/postSlice";

import { Button, Card, Input, Space } from "antd";

const UserPost = ({ history }) => {
  const dispatch = useDispatch();

  const [id, setId] = useState();
  const [bodyText, setBodyText] = useState("");
  const { loading, post, edit, bio } = useSelector((state) => ({
    ...state.app,
  }));

  const onChangeInput = (e) => {
    setId(e.target.value);
  };

  const fetchUserPost = () => {
    if (!id) {
      window.alert("Please enter id");
    } else {
      dispatch(getPost({ id }));
      setId("");
    }
  };
};
```

# Create

In PostSlice:

```
export const createPost = createAsyncThunk(
  "post/createPost ",
  async ({ values }) => {
    return fetch(`http://localhost:3000/api/users`, {
      method: "POST",
      headers: {
        Accept: "application/json",
        "Content-type": "application/json",
      },
      body: JSON.stringify({
        name: values.name,
        bio: values.bio,
      }),
    }).then((res) => res.json());
  }
);
```

```
// create post
[createPost.pending]: (state, action) => {
  state.loading = true;
},
[createPost.fulfilled]: (state, action) => {
  state.loading = false;
  state.post = [action.payload];
},
[createPost.rejected]: (state, action) => {
  state.loading = false;
  state.error = action.payload;
},
```

```
const dispatch = useDispatch();
const { loading, post } = useSelector((state) => ({ ...state.app }));
const [showPost, setShowPost] = useState(false);

const handleSubmit = (e) => {
  e.preventDefault();
  dispatch(createPost({ values }));
};
```

## Create (Contd.)

The UI:

Understand Redux Toolkit Using API

### Create Post

safa 6

bio of 6th element



Go Back

Submit

Table before submission:

	id [PK] integer	name character varying (100)	bio character varying (255)
1	1	sss	admin
2	3	sss	ssaseee
3	4	safa safa	Test test

Table after submission:

	id [PK] integer	name character varying (100)	bio character varying (255)
1	1	sss	admin
2	3	sss	ssaseee
3	4	safa safa	Test test
4	6	safa 6	bio of 6th element



# Update

```
reducers: {  
  setEdit: (state, action) => {  
    state.edit = action.payload.edit;  
    state.bio = action.payload.bio;  
  },  
},
```

```
    },  
    dispatch(setEdit({ edit: false, bio: "" }));  
  }  
  >  
  Save  
</Button>  
  <Button  
    onClick={() =>  
      dispatch(setEdit({ edit: false, bio: "" }));  
    }  
  >  
    Cancel  
</Button>
```

User Id: 6

bio of 6th element

Delete

Edit



## Update(Contd.)

After Clicking edit

User Id: 6

bio of 6th element

Save

Cancel

```
export const updatePost = createAsyncThunk(
  "post/updatePost ",
  async ({ id, bio, name }) => {
    return fetch(`http://localhost:3000/api/users/${id}`, {
      method: "PUT",
      headers: {
        Accept: "application/json",
        "Content-type": "application/json",
      },
      body: JSON.stringify({
        name,
        bio,
      }),
    }).then((res) => res.json());
  }
);
```

```
// update post
[updatePost.pending]: (state, action) => {
  state.loading = true;
},
[updatePost.fulfilled]: (state, action) => {
  state.loading = false;
  state.post = [action.payload];
},
[updatePost.rejected]: (state, action) => {
  state.loading = false;
  state.error = action.payload;
},
```

# Update (Contd.)

```
onClick={() => {  
  dispatch(  
    updatePost({  
      id: post[0].id,  
      bio: bodyText,  
      name: post[0].name,  
    })  
  });  
};
```

Understand Redux Toolkit Using API

## Fetch Post

Fetch User Post

Create User Post

User Id: 6

bio of 6th element updated

Save

Cancel

User Id: 6

bio of 6th element updated

	Id [PK] integer	name character varying (100)	bio character varying (255)
1	1	sss	admin
2	3	sss	ssaseee
3	4	safa safa	Test test
4	6	safa 6	bio of 6th element updated

# Delete

Understand Redux Toolkit Using API

## Fetch Post

Fetch User Post

Create User Post

User Id: 6

bio of 6th element updated

Delete

Edit

```
export const deletePost = createAsyncThunk(
  "post/deletePost ",
  async ({ id }) => {
    return fetch(`http://localhost:3000/api/users/${id}`, {
      method: "DELETE",
    }).then((res) => res.json());
  }
);
```

```
// for delete objects
[deletePost.pending]: (state, action) => {
  state.loading = true;
},
[deletePost.fulfilled]: (state, action) => {
  state.loading = false;
  state.post = {};
},
[deletePost.rejected]: (state, action) => {
  state.loading = true;
  state.error = action.payload;
},
```

	id [PK] integer	name character varying (100)	bio character varying (255)
1	1	sss	admin
2	3	sss	ssaseee
3	4	safa safa	Test test



**THANK YOU**