



NEXT.js

# Setup **Redux** in NextJS



**Wasif Alam**  
@wasif alam





## Step #1: Installing Next App

Let's first install Next.js using the following command:

```
npx create-next-app@latest
```

Ensure that you use the following settings to achieve the same result as mine

```
→ Desktop npx create-next-app@latest
✓ What is your project named? ... redux-next
✓ Would you like to use TypeScript? ... No / Yes
✓ Would you like to use ESLint? ... No / Yes
✓ Would you like to use Tailwind CSS? ... No / Yes
✓ Would you like to use `src/` directory? ... No / Yes
✓ Would you like to use App Router? (recommended) ... No / Yes
✓ Would you like to customize the default import alias (@/*)? ... No / Yes
? What import alias would you like configured? > @/*
```





## Step #2: Installing Redux

Now, navigate to the root directory of the Next.js app we've just created and proceed to install the following npm packages:

```
npm i react-redux @reduxjs/toolkit
```

Make sure your **'package.json'** dependencies resemble this:

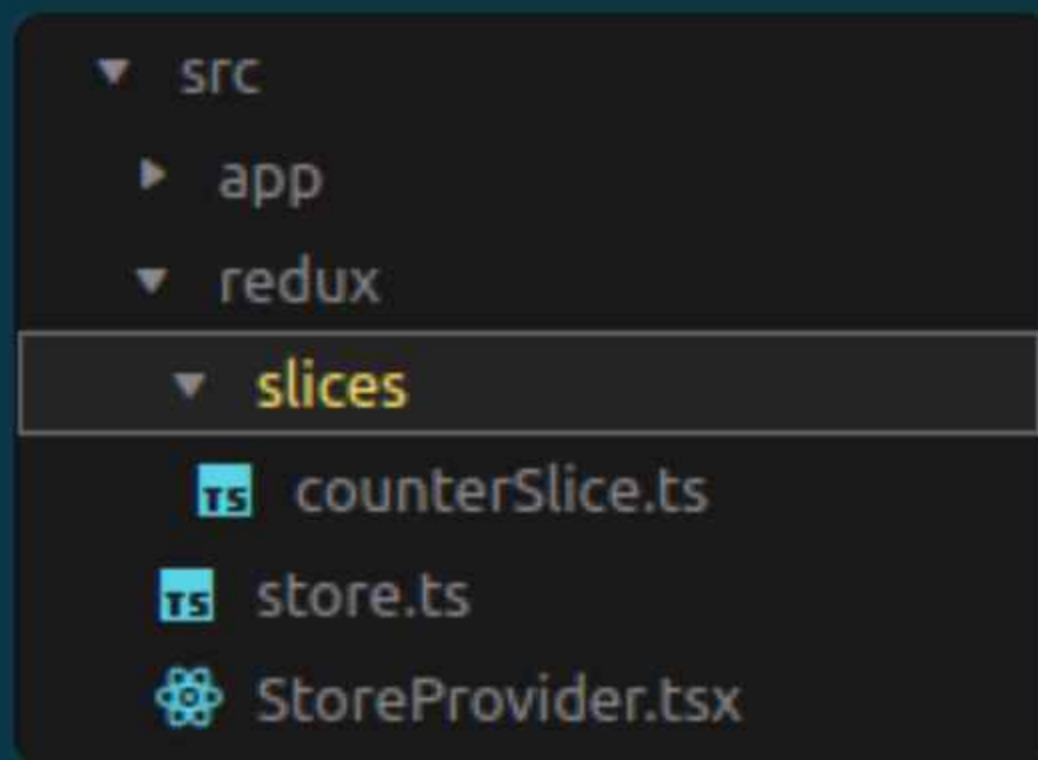
```
"dependencies": {  
  "@reduxjs/toolkit": "^1.9.7",  
  "next": "13.5.4",  
  "react": "^18",  
  "react-dom": "^18",  
  "react-redux": "^8.1.3"  
},
```





## Step #3: Setting Up Redux

Create a 'redux' folder within the 'src' folder, and set up the folders and files as shown below:



We will be implementing a very basic counter app for an example.



## Step #4: Creating a Redux Slice

Place the following code within the 'counterSlice.ts' file:

```
import { createSlice } from '@reduxjs/toolkit';

const counterSlice = createSlice({
  name: 'counter',
  initialState: {
    count: 0,
  },
  reducers: {
    increment(state) {
      state.count++;
    },
    decrement(state) {
      state.count--;
    },
  },
});

export const counterActions = counterSlice.actions;
export default counterSlice;
```





## Step #5: Setting up the Redux Store

Place the following code within the `'store.ts'` file:

```
import { configureStore } from '@reduxjs/toolkit';
import counterSlice from './slices/counterSlice';

export const store = configureStore({
  reducer: {
    counter: counterSlice.reducer,
  },
});
```







## Step #6: Setting up the StoreProvider

Place the following code within the 'StoreProvider.tsx' file:

```
'use client';

import { store } from '../store';
import { Provider } from 'react-redux';

export const StoreProvider = (
  { children }: { children: React.ReactNode }
) => {
  return <Provider store={store}>{children}</Provider>;
};
```





## Step #7: Connecting Redux to Next.js

Next, go to the `'src/app'` folder and open `'layout.tsx'`.

Import the `'StoreProvider'` component.

```
import { StoreProvider } from '@redux/StoreProvider';
```

Wrap the `'children'` prop with `'StoreProvider'`.

```
export default function RootLayout({
  children,
}): {
  children: React.ReactNode;
}) {
  return (
    <html lang="en">
      <body className={inter.className}>
        <StoreProvider>{children}</StoreProvider>
      </body>
    </html>
  );
}
```



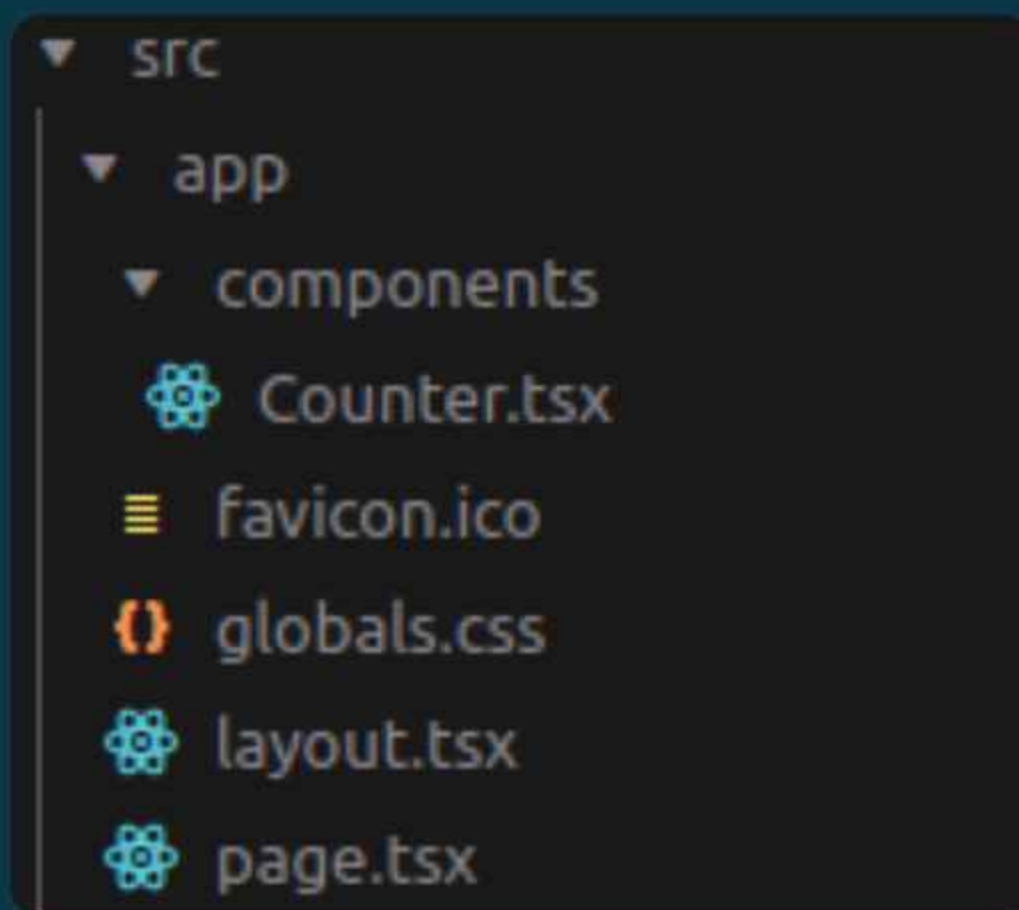




## Step #8: Dispatching Actions & Accessing state

Within the same '`src/app`' folder create a folder named '`components`' and create a file named '`Counter.tsx`' inside of it.

Should look something like this:





Inside of the '**Counter.tsx**' file we need to import a couple of hooks and our '**counterActions**' action creators for dispatching actions.

Imports should look something like this:

```
'use client';  
  
import { useSelector, useDispatch } from 'react-redux';  
import { counterActions } from '@redux/slices/counterSlice';
```

**Note** - We have to use '**use client**' directive at the top in order to access state and dispatch actions in Next.js







Now we need to add the following code in order to access **state** and dispatch **actions** inside of the '**Counter**' component:

```
const Counter = () => {  
  const counter = useSelector(  
    (state: any) => state.counter.count);  
  
  const dispatch = useDispatch();  
  
  const incrementHandler = () => {  
    dispatch(counterActions.increment());  
  };  
  
  const decrementHandler = () => {  
    dispatch(counterActions.decrement());  
  };  
  
  return // Return goes here  
  
  export default Counter;
```







Next, simply return the following **'div'** from the **'Counter'** component to display a basic UI in the browser:

```
const Counter = () => {  
  // Redux state, dispatch and handler  
  // function goes here  
  
  return (  
    <div>  
      <h1>{counter}</h1>  
      <div>  
        <button onClick={decrementHandler}>  
          Decrement  
        </button>  
        <button onClick={incrementHandler}>  
          Increment  
        </button>  
      </div>  
    </div>  
  );  
  export default Counter;
```





Now, one last step remains – import the '**Counter**' component into the '**page.tsx**' file, located at the root of the '**src/app**' folder.

```
import Counter from './components/Counter';

const Home = () => {
  return (
    <main>
      <Counter />
    </main>
  );
};

export default Home;
```

**Note:** The '**page.tsx**' file is a server component, and we are importing '**Counter.tsx**' which is a client component, into it.





That's it, everyone! Now, when we run our development server for the Next.js app, we should expect to see a very basic UI like this, and it should work just fine:



**Note:** I've added basic styles for a better look, which are not part of our initial '**Counter**' component.

