

Hot Module Replacement

A brief introduction to Hot Module Replacement and its use in React App.

Hot Module Replacement (HMR) is a tool for reloading your application in the browser without the page refresh. Hot Module Replacement can be used in the `src/index.js` file to improve your experience as a developer. By default, *create-react-app* will cause the browser to refresh the page whenever its source code is modified. Try it by changing the `helloWorld` variable in your `src/App.js` file, which should cause the browser to refresh the page. There is a better way of handling source code changes during development, however.

You can activate HMR in *create-react-app* by adding the following configuration to your `src/index.js` file:

```
import React from 'react';
import ReactDOM from 'react-dom';
import App from './App';
import './index.css';

ReactDOM.render(
  <App />,
  document.getElementById('root')
);

if (module.hot) {
  module.hot.accept();
}
```



Again, change the `helloWorld` variable in your `src/App.js` file. The browser shouldn't refresh, but the application will reload and show the correct output. HMR comes with multiple advantages:

Imagine you are debugging your code with `console.log()` statements. These statements will stay in your developer console, even though you changed your code because the browser doesn't refresh the page anymore. In a growing application, page refreshes delay productivity; HMR removes this obstacle by eliminating the incremental time loss it takes for a browser to reload.

The most useful benefit of HMR is that you can keep the application state after the application reloads. For instance, assume you have a dialog or wizard in your application with multiple steps, and you are on step 3. Without HMR, you make changes to the source code and your browser refreshes the page. You would then have to open the dialog again and navigate from step 1 to step 3 each time. With HMR your dialog stays open at step 3, so you can debug from the exact point you're working on. With the time saved from page loads, this makes HMR an invaluable tool for React developers.

Exercises:

- Change your `src/App.js` source code a few times to see HMR in action

Further Reading:

- Watch the first 10 minutes of [Live React: Hot Reloading with Time Travel](#) by Dan Abramov