

App is not ready to push to production. In order to make it ready & fast there are several library along react is needed as well.

npm :- it's not node package manager. There's no full form of npm.

It's package manager. But npm not stands for node package manager.

when we use create-react-app, npm is already there inside it.

npm init :- setting up new or existing npm package.

↳ it will ask some questions & create package.json file which is configuration file for npm.

↳ contains package name, version, entry point, packages to install in app
↳ (dependencies)

Now we have npm configured, we can install dependencies.

First is bundler which bundles HTML, CSS & JS files together & make it production ready.

There are diff. bundler like:

↳ webpack

↳ parcel ← will be used in app.

↳ vite

npm install <dependencies>

or

npm install -D <dependencies>

There are 2 type of dependencies:

- 1) Dev dependency
- 2) Normal dependency.

parcel is bundler which only required to minify, so it only requires on dev.

`npm install -D parcel`

Package.json updated with:

```
"devDependencies": {  
  "parcel": "^2.11.0"
```

}

or patch

- ① - it updates minor ↓ version if comes in future (Best practice to use ^)
- ② - it updates only patch version if comes in future

$\wedge 2.11.0$ - accept all versions till 3.0.0

$\sim 2.11.0$ - accept version till <2.12.0

latest - install latest version

* - install any version

npm install ... also created

package-lock.json along with
package.json, also created node-modules
folder.

what is package-lock.json ?

package-lock.json keeps track of
exact version installed for given
package. But package.json will stay
with ^ or ~ or other options.

package.json :- configuration of packages

node-modules :- Database or data of
these packages

transitive dependencies

Though you only installed parcel but it install so many packages in node-modules folder. Because parcel as a project require few other package as dependency & those package require other package as dependencies & so on. This is called transitive dependencies.

That's why node-modules is huge in size.

Best practice :-

We'll not push node-modules to git or production because it's very huge so create .gitignore and mention node-modules there
↳ package.json & package-lock.json should be part of git because it has all package & exact versions. It can create

exact node-modules on production
as you're on dev.

Igniting an app using parcel

Below is the command:

npx parcel index.html

↑ entry point of
an app.

npm : install the package

npx : execute the package

These are 2 ways to get react library :

1) using CDN links

2) using npm react package

Fetching from CDN is costly operation

```
npm install react
```

```
npm install react-dom
```

after this we don't need to use CDN.

But this won't work as JS code won't find React. So need to import it.

```
import React from "react";
```

Similarly we also need to import react-dom as well.

or
→ "react-dom/client"

```
import ReactDOM from "react-dom";
```

It will give an error "Browser scripts don't understand import or exports"

in order to resolve this update
App.js line in index.html with below
line:

```
<script type="module" src="./App.js">  
</script>
```

without type attribute, it will act
as normal JS instead of react.js file.

Feature of Parcel :-

- ↳ creates development build
- ↳ creates local server
- ↳ HMR = HOT Module Replacement
- ↳ File watching Algorithm - written in C++
- ↳ caching - faster builds (using `-parcel-cache` in project repo)
- ↳ image optimization
- ↳ Minify /bundle all file in prod build as well
- ↳ compress file
- ↳ Differential bundling - to support older browsers (different bundle for

- ↳ diff. browsers)
- ↳ Diagnostics (giving beautify error)
- ↳ Error Handling
- ↳ HTTPS
- ↳ consistent hashing
- ↳ Tree Shaking - remove unused code

Create production build using parcel

In package.json, App.js is set as main so when we run below command , it conflicts with index.html as entry point & give errors.

```
npx parcel build index.html
```

- ↳ Development build for parcel host on 1234 port is coming from dist folder.
- ↳ Prod build also generate in dist folder in 3 files : index.html, .js &

.css

• parcel-cache & dist can be re-generated
so we'll put it into .gitignore.

Create build for different browsers:-

browserslist is package to build
for all different browsers.

Mention your requirement in project
(package.json) :-

```
"browserslist": [  
    "last 2 versions"  
]
```



"last 2 chrome versions"

"last 2 firefox versions"

This query can be build differently
based on requirements.

It can be checked on

browserslist.dev site documentation.

