

Chapter-02: Igniting our App

▼ Added a custom attribute hello: "world" - Akshay said Its props. So Props are html attributes?

I don't see it for course-materials-container though. No props as html attributes

```
const container = React.createElement(
  "div",
  {
    id: "container",
    hello: "world",
  },
  [heading, heading2]
);

console.log(heading);
```

```
<body>
  <div id="root">
    <div id="container" hello="world"> == $0
      <h1 id="title">Heading 1</h1>
      <h2 id="title">Heading 2</h2>
    </div>
  </div>
  <script crossorigin src="https://unpkg.com/react@18/umd/react.development.js"></script>
  <script crossorigin src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>
  <script src="App.js"></script>
</body>
</html>
```

```
<div id="course-materials-container">
  <div class="_3W1Kw">
    <div>
      <div id="course-materials-list-container">
        <div class="_3W1Kw">
```

▼ Bundler

- React is a library, it does not enforce you to use any library like other frameworks. we can use our choice.
- create-react-app uses webpack as bundler
- We can use any: Webpack, Parcel, Vite
- Why Parcel in this training:

- easy to teach, easy setup, all all features of webpack, vite
- Install Parcel using npm
 - Initialise npm
 - npm init -y
 - npm install -D parcel
 - What is Devdependency - D : needed only in dev environment
 - package.lock.json →
 - To know what exact version of library we use in production - this file help.
In package.json, it may not be exact version. eg: "parcel": "^2.8.3" version -
^ → shoot version auto upgrade
 - Locks the version
 - Never have to keep in git ignore. Then you will face issue- it is working in my local and not in prod
 - Maintains hash , maintains integrity to ensure exact version is running in prod.
How?

```
node_modules/@parcel/bundler-default": {
  "version": "2.8.2",
  "resolved": "https://registry.npmjs.org/@parcel/bundler-default/-/bundler-default-2.8.2.tgz",
  "integrity": "sha512-7ao0vc/v8WGHZaS1SyS5R8wzqmmXEr9mhIIB2cbLQ4LA2WUtKsYcvZ2gJJuIAAN1CHC66xqwYjIJScQck/QXg=",
  "dev": true,
}
```

- Should we add nodemodules to add .gitignore
 - nopes. They are heavy
 - package.lock.json has sufficient information to recreate node_modules exactly the same as in dev machine
 - Anything we can generate on server, will put in .gitignore
 - node_modules
 - dist
 - .parcel-cache

▼ Parcel is beast

- Provides things what vite or webpack provides, easy to setup, teach

Parcel – The zero configuration build tool for the web.

Parcel combines a great out-of-the-box development experience with a scalable architecture that can take your project from just getting started to massive production application.

📦 <https://parceljs.org/>



PARCEL

The zero configuration
build tool for **the web**.

Ignite your app

- `npx parcel index.html`
- here npx means execute using npm. index.html is entry point for parcel.
- This command will start a localhost server: <http://localhost:1234>

▼ What does Parcel do?

```
/**
 *
 * Created A Server
 * HMR - Hot Module Replacement Server
 * File Watcher algorithm - C++
 * BUNDLING
 * MINIFY
 * Cleaning our Code
 * Dev abd Production Build
 * Super Fast build algorithm
 * Image Optimization
 * Caching while development
 * Compression
 * Compatble with older version of browser
 * HTTPS on dev
 * port Number
 * Consistent Hashing Algorithm
 * Zero Config
 *
 */
```

- Parcel provides Hot module Replacement (HMR) - keeps track of file we are updating, and reloads it in server. There is File Watcher algorithm, written in C++.
- Bundling, minify, cleaning our code (Remove console.logs):

- `npx parcel index.html` This will just create development build. `npx parcel build index.html` This will create production build
 - Will bundle, minify & clean the code and push it to dist folder
 - We will just get three files though there are large no of files in code (ignore map files, which are just helper files)

```

akshaysaini@Akshays-MacBook-Pro namaste-react-live % npx parcel build index.html
✨ Built in 1.51s

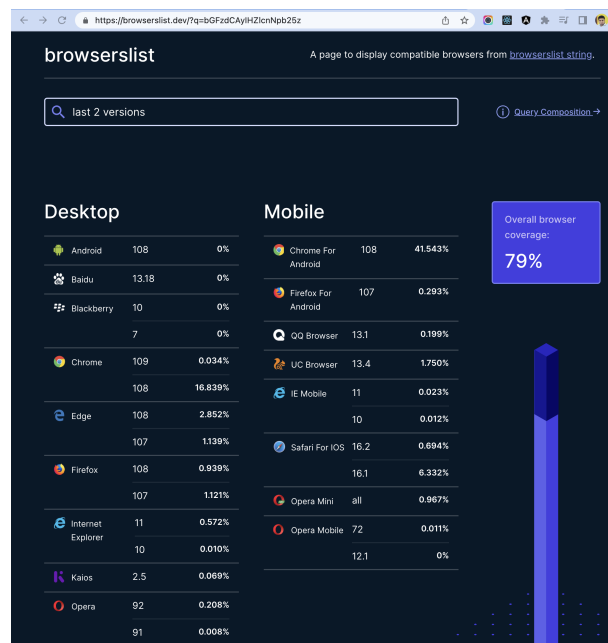
dist/index.html          413 B    237ms
dist/index.96f0bad0.css  98 B     19ms
dist/index.a335b86b.js  140.32 KB 1.03s
  
```

- Image Optimisation
 - What takes more time to load in website?
 - media, images
 - Parcel does image optimisation also. Will minify image. How? (only when image is in project - not backend)
 - <https://parceljs.org/recipes/image/>
- Caching while development:
 - Later builds in development just takes few ms. (cache saved in .parcel-cache directory)
- Compresses (eg: rename variables)
- Https:
 - Something only work on https? Parcel gives us that functionality
 - `npx parcel index.html --https` but will not work in local , as browser doesn't trust localhost
- Port number
 - Parcel will handle assigning port numbers if there are multiple projects
- Consistent Hashing Algorithm. What is this?
- Zero Config
 - Unlike webpack, no need of any configuration. Just give entry-point
- Makes app Compatible with older version of browser. How?

- Parcel has browserlist dependency. We can add supported browsers in package.json. Use <https://browserslist.dev/> to get array value

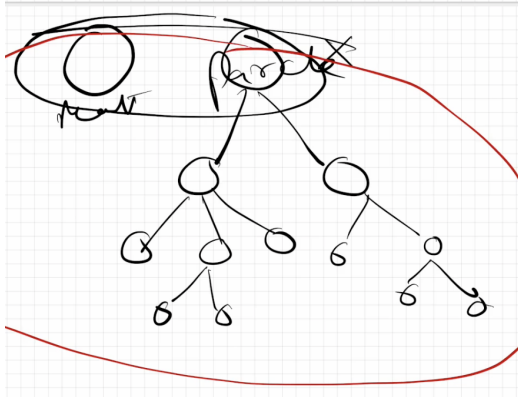
<https://github.com/browserslist/browserslist>

```
"dependencies": {
  "react": "^18.2.0",
  "react-dom": "^18.2.0"
},
"browserslist": [
  "last 2 Chrome versions"
]
```



▼ What are Transitive dependencies:

- dependency of dependency





▼ Home work:

Different type of scripts

`<script>`: The Script element - HTML: HyperText Markup Language | MDN

The `<script>` HTML element is used to embed executable code or data; this is typically used to embed or refer to JavaScript code. The `<script>` element can also be used with other languages, such as WebGL's GLSL shader programming

 <https://developer.mozilla.org/en-US/docs/Web/HTML/Element/script>

 mdn web docs

Parcel documentation

Development

Parcel includes a development server out of the box supporting hot reloading, HTTPS, an API proxy, and more.

 <https://parceljs.org/features/development/>

