1. What is Emmet?

*Emmet is a plugin for many popular text editors which greatly improves HTML & CSS workflow:*

*#page>div.logo+ul#navigation>li\*5>a{Item $}*

*...can be transformed into*

*<div id="page">*

*<div class="logo"></div>*

*<ul id="navigation">*

*<li><a href="">Item 1</a></li>*

*<li><a href="">Item 2</a></li>*

*<li><a href="">Item 3</a></li>*

*<li><a href="">Item 4</a></li>*

*<li><a href="">Item 5</a></li>*

*</ul>*

*</div>*

1. Difference between a Library and Framework?

|  |  |  |
| --- | --- | --- |
| ***Parameters*** | ***Library*** | ***Framework*** |
| *Definition* | *Libraries provide developers with predefined functions and classes to make their work easier and boost the development process.* | *Framework, on the other hand, is like the foundation upon which developers build applications for specific platforms.* |
| *Inversion of Control* | *By using a library, you can control the flow of the application and call the library.* | *In contrast, when you use a framework, the control is inverted, i.e., the framework controls the flow and calls your code.* |

1. What is CDN? Why do we use it?

*A content delivery network (CDN) refers to a geographically distributed group of servers which work together to provide fast delivery of Internet content. A CDN allows for the quick transfer of assets needed for loading Internet content including HTML pages, javascript files, stylesheets, images, and videos*.

1. Why is React known as React?

*React is named React because of its ability to react to changes in data. When the data in a React component changes, React will automatically re-render the component so that it reflects the new data. This makes it easy to create performant user interfaces that always look up-to-date.*

1. What is crossorigin in script tag?

*<script crossorigin src="https://unpkg.com/react@16/umd/react.production.min.js"></script>*

*Normal script elements pass minimal information to the window.onerror for scripts which do not pass the standard CORS checks. To allow error logging for sites which use a separate domain for static media, use this attribute*

1. What is difference between React and ReactDOM

*As the name implies, ReactDOM is the glue between React and the DOM. For everything else, there’s React. You use React to define and create your elements, for lifecycle hooks, etc. i.e. the guts of a React application.*

*So, in brief:*

* *React: a****javascript library****, designed for****building user interfaces***
* *React-DOM: a****complimentary library to React****which****glues React to the browser****DOM*

1. What is difference between react.development.js and react.production.js files via CDN?

*The very basic difference is that Production Build has ugly, minified(compressed) version of your javascript code, so this makes rendering of file on end user's browser very quick and performance enhancing.*

*The development build is used - as the name suggests - for development reasons. You have Source Maps, debugging and often times hot reloading ability in those builds.*

1. What is async and defer?

*Async allows your script to run as soon as it’s loaded, without blocking other elements on the page. Defer means your script will only execute after the page has finished loading.*

1. What is NPM?

npm stands for Node Package Manager. It's **a library and registry for JavaScript software packages**. npm also has command-line tools to help you install the different packages and manage their dependencies.

1. What is `Parcel/Webpack`? Why do we need it?

Parcel and webpack are the bundlers used mostly for JavaScript or Typescript code that helps you to minify, clean, and make your code compact so that it becomes easier to send a request or receive the response from the server when it usually takes you to transfer multiple files without using any bundler for loading the page of your application. Both of these bundlers substantially reduce the time it takes for the transfer of data and files to the server from the application. Along with that both bundlers parcel and webpack remove the unnecessary comments, new lines, any kind of block delimiters, and white spaces while the functionality of the code remains unchanged.

The bundler needs configuration files for describing all the plugins, output and entry loaders, transformations, and other details in the case of webpack. In the case of the parcel, we don’t need to specify the configuration in a separate config file after it is installed. We can directly go for running the build process in parcel-bundler and all the other things are managed by parcel on its own.

1. What is `.parcel-cache`?

The .cache folder (or .parcel-cache in parcel v2) stores information about your project when parcel builds it, so that when it rebuilds, it doesn't have to re-parse and re-analyze everything from scratch. It's a key reason why parcel can be so fast in development mode. I think committing it to git would be a bad idea - it would add a large number of (unnecessary) changes to your commit history, and it could easily get out-of-sync with the code that generated it.

1. What is `npx` ?

The npx stands for **Node Package Execute** and it comes with the npm, when you installed npm above 5.2.0 version then automatically npx will installed. It is an npm package runner that can execute any package that you want from the npm registry without even installing that package. The npx is useful during a single time use package. If you have installed npm below 5.2.0 then npx is not installed in your system. You can check npx is installed or not by running the following command:

npx -v

|  |  |
| --- | --- |
| **npm** | **npx** |
| If you wish to run package through npm then you have to specify that package in your package.json and install it locally. | A package can be executable without installing the package. It is an npm package runner so if any packages aren’t already installed it will install them automatically. |
| To use `create-react-app` in npm the commands are `npm install create-react-app` then `create-react-app myApp` (Installation required). | In npx you can create a react app without installing the package: `npx create-react-app myApp` This command is required in every app’s life cycle only once. |
| Npm is a tool that use to install packages. | Npx is a tool that use to execute packages. |
| Packages used by npm are installed globally. You have to care about pollution in the long term. | Packages used by npx are not installed globally. You don’t have to worry about for pollution in the long term. |

1. What is difference between `dependencies` vs `devDependencies`

| **Dependencies** | **devDependencies** | **peerDependencies** |
| --- | --- | --- |
| A dependency is a library that a project needs to function effectively. | DevDependencies are the packages a developer needs during development. | A peer dependency specifies that our package is compatible with a particular version of an npm package. |

1. What is Tree Shaking?

**Tree shaking** is a term commonly used within a JavaScript context to describe the removal of dead code.It relies on the [import](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Statements/import) and [export](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Statements/export) statements to detect if code modules are exported and imported for use between JavaScript files.In modern JavaScript applications, we use module bundlers (e.g., [webpack](https://webpack.js.org/) or [Rollup](https://github.com/rollup/rollup)) to automatically remove dead code when bundling multiple JavaScript files into single files. This is important for preparing code that is production ready, for example with clean structures and minimal file size.

1. What is Hot Module Replacement?

Hot Module Replacement (HMR) is **a Webpack feature to update the application modules without reloading and repainting everything**. By using the HMR technique the application development becomes faster as fewer resources are loaded after saving the changes in the project.

1. List down your favourite 5 superpowers of Parcel and describe any 3 of them in your own words.

* a bundler is able to compress all your code.
* bundler will minify all the code. The way **minification** works is longer variables are replaced with shorter ones to save space. For example options would be replaced with o.
* make your code as small as possible.
* **dead-code elimination** - if you have a function that is never used, it will detect that and remove that.

1. What is `.gitignore`? What should we add and not add into it?

gitignore file is **a text file that tells Git which files or folders to ignore in a project**. A local . gitignore file is usually placed in the root directory of a project. You can also create a global . gitignore file and any entries in that file will be ignored in all of your Git repositories.

E.g: node modules,parcel-cache those folder/files that can be re-generated

1. What is the difference between `package.json` and `package-lock.json`

**package.json** is a versioning file used to install multiple packages in your project.

**package.lock.json** is created for **locking the dependency with the installed version.**It will install the exact latest version of that package in your application and save it in package.json.

Without package.lock.json, there might be some differences in installed versions in different environments. To overcome this problem, package.lock.json is created to have the same results in every environment. It should be in source control with the package.json file because if any other user will clone the project and install dependencies then it will install the exact same dependencies as in package.lock.json to avoid differences.

1. What is `node\_modules` ? Is it a good idea to push that on git?

**A directory created by npm and a way of tracking each packages you install locally via package**

Pushing the whole node\_modules folder (often more than 100 MB) to your repository, **will cost you memory space**. A few kb (package. json only) compared with hundreds of MB (package.

1. What is the `dist` folder?

The dist folder is **the build folder which contains all the files and folders which can be hosted in server**.

1. What is `browserlists`

Browserslist is a tool that allows specifying **which browsers** should be supported in your frontend app by specifying "queries" in a config file. It's used by frameworks/libraries such as React, Angular and Vue, but it's not limited to them.

“browserslist": [

"defaults and supports es6-module",

"maintained node versions"

]

1. JSX and superPowers of JSX.

JSX stands for **JavaScript XML**. JSX allows us to write HTML in React. JSX makes it easier to write and add HTML in React.

* JSX makes it easier to write or add HTML in React.
* JSX can easily convert HTML tags to react elements.
* It is faster than regular JavaScript.
* JSX allows us to put HTML elements in DOM without using [appendChild()](https://www.geeksforgeeks.org/html-dom-appendchild-method/) or [createElement()](https://www.geeksforgeeks.org/html-dom-createelement-method/) method.
* As JSX is an expression, we can use it inside of if statements and for loops, assign it to variables, accept it as arguments, or return it from functions.
* JSX prevents XSS (cross-site-scripting) attacks popularly known as injection attacks.
* It is type-safe, and most of the errors can be found at compilation time.

1. Role of type attribute in script tag.what options can be used?

The **HTML <script> type Attribute** is used to specify the MIME type of script and identify the content of the Tag. It has a Default value which is “**text/javascript”**.

**Syntax:**

<script type="media\_type">

**Attribute Values:** It contains a single value i.e media\_type which specifies the MIME type of script.  
**Common “media\_type” values are:**

* text/javascript (this is default)
* text/ecmascript
* application/ecmascript
* application/javascript