What is React Js

React.js is a JavaScript library for building user interfaces, particularly for single-page applications. It allows developers to create reusable UI components, which can be composed together to build complex user interfaces efficiently. React.js uses a virtual DOM (Document Object Model) to optimize performance by minimizing the number of updates to the actual DOM, resulting in faster rendering and a smoother user experience.

Key Features of React.js

- **Component-Based Architecture:** React.js follows a component-based architecture, where UIs are divided into reusable components. This modular approach makes it easier to manage and maintain large-scale applications.
- **Virtual DOM:** React.js utilizes a virtual DOM to represent the UI in memory. When changes occur, React.js calculates the most efficient way to update the actual DOM, resulting in better performance.
- **JSX:** JSX (JavaScript XML) is a syntax extension for JavaScript that allows developers to write HTML-like code within JavaScript. JSX makes it easier to create and manipulate React elements.
- **One-Way Data Binding :** React.js enforces a unidirectional data flow, where data flows from parent components to child components. This ensures predictable behavior and easier debugging.
- **Declarative Syntax:** React.js promotes a declarative programming style, where developers describe what the UI should look like based on the current state, rather than imperatively defining how to achieve it.

Creating a React App: A Fast and Efficient Development Experience

Here's the Step to Create a React app

Step-01 - npm install –g create-react-app (For creating a React Project)

Step-02 - create-react-app my-app (user define name) (it will take sometime once finish this you will get a happy hacking message)

Step-03 - cd my-app 4. npm start (react files running comment)

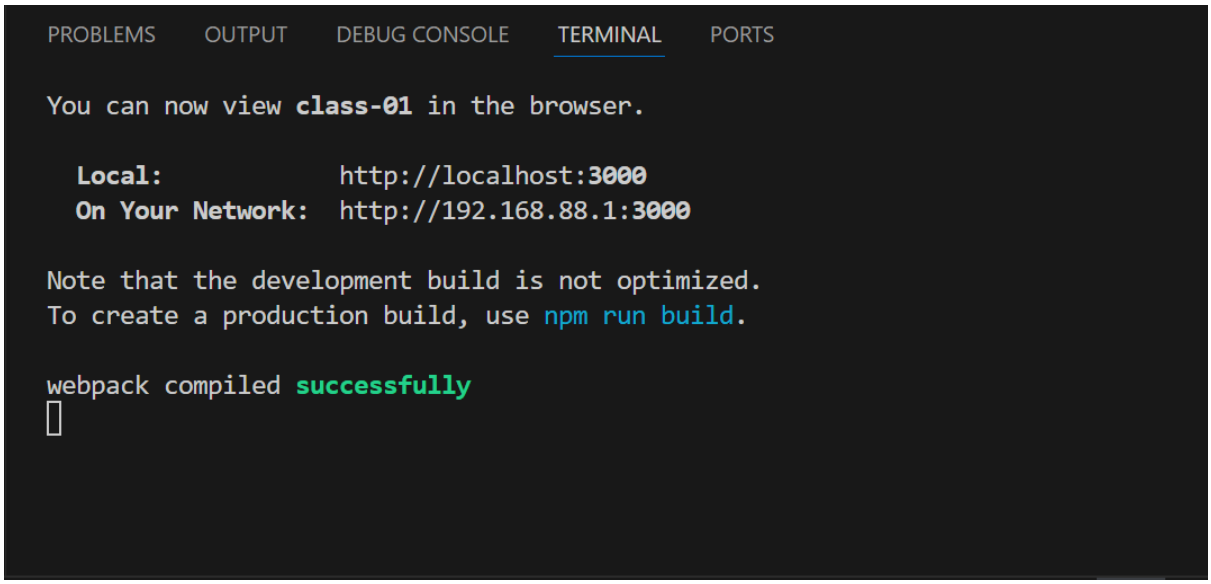
(or)

Step-01- npx create-react-app my-app

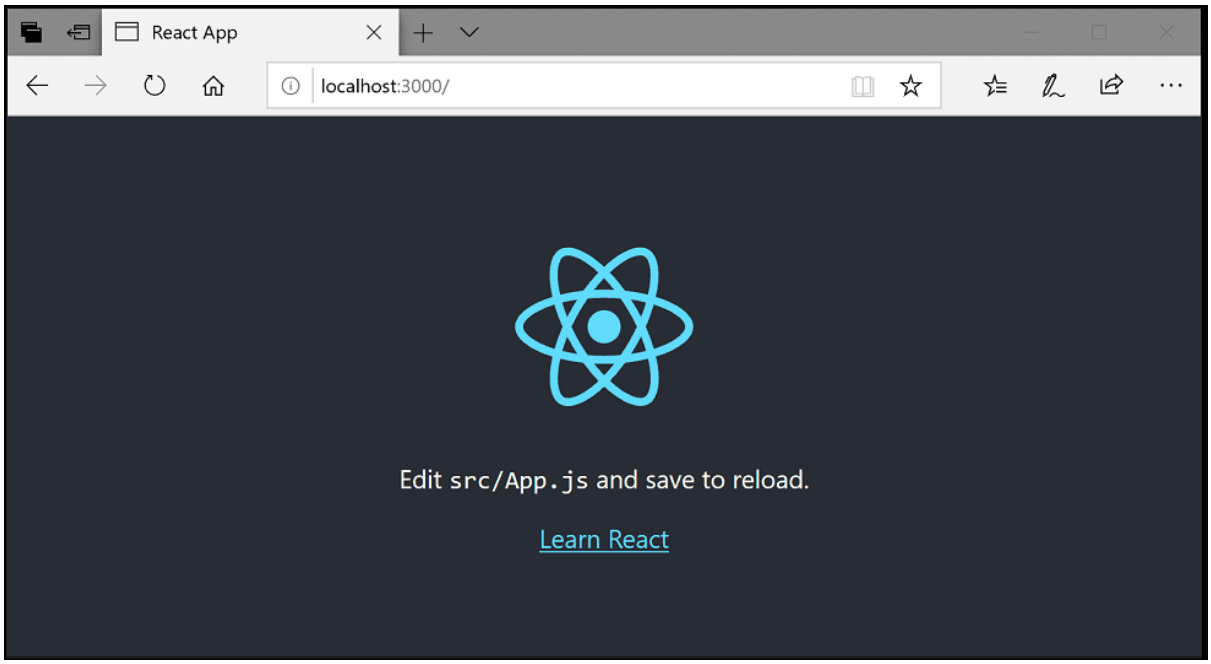
Step-02 cd my-app

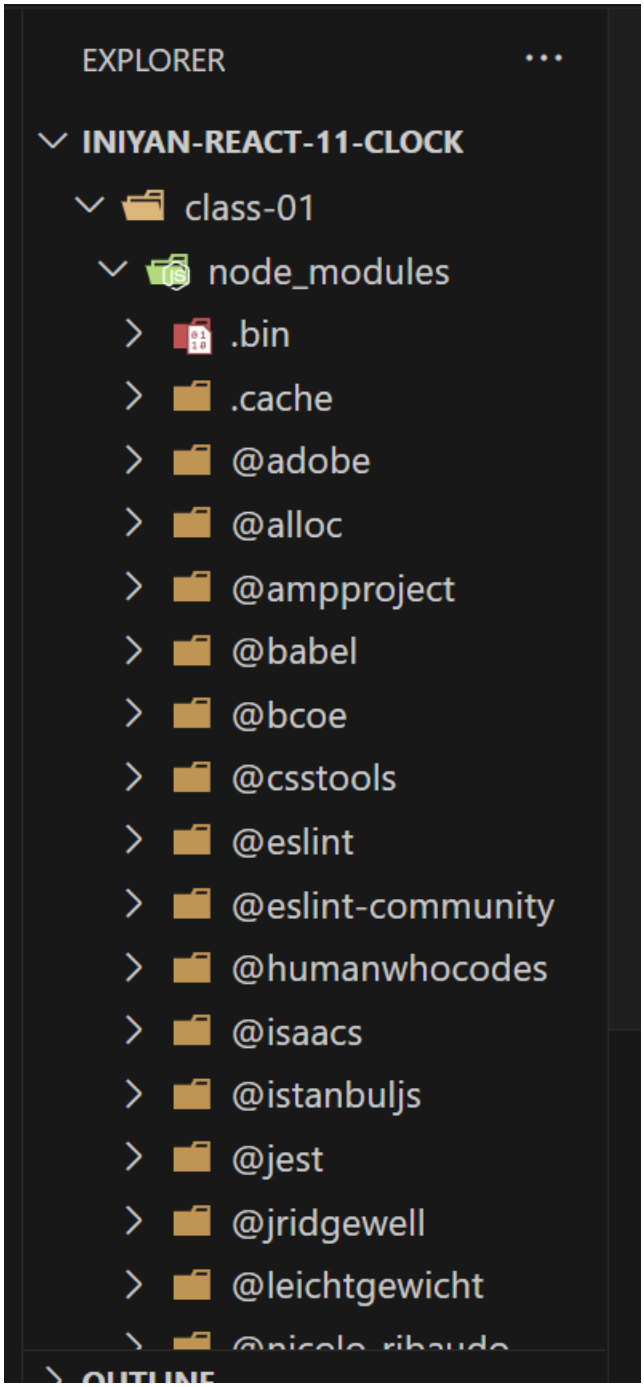
Step-03 npm start (To Run the Project)

After completing this steps you can find the Terminal output like

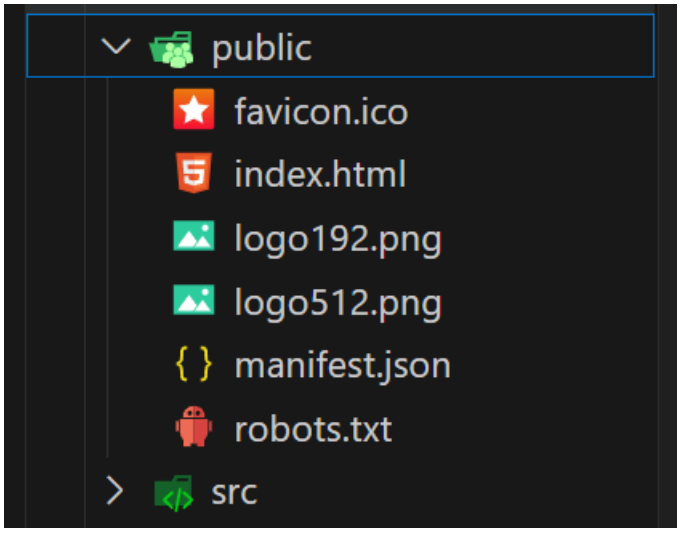


And Browser Output will be

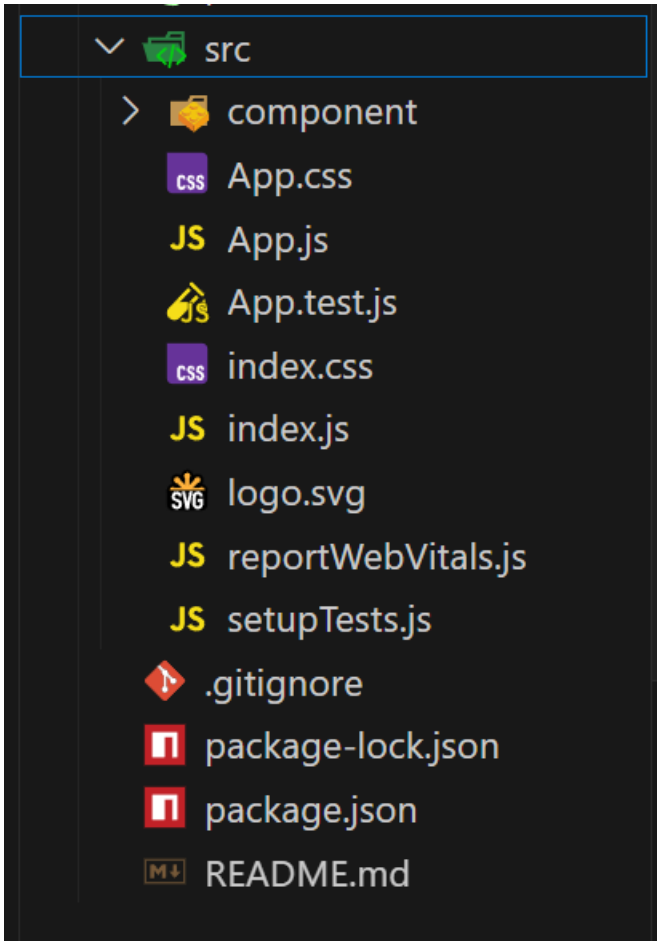




Iniyan-react-11-clock is a folder created for react



Public folder is used to add images and documents that will display in the browser without any process



src is an important folder that will process with our app and it will show in output

App.css -Used to show styling in the page

App.js -Main file of the Project

Index.css --Will contain the Style of the Pages

Index.js-is a main file all components are going to register here it will render in the div called root it placed in **index.html**

Index.html-- it is an single page application so it render in index.js file it will place in index.html and it will show the output

gitingnore --if we going to import the file in git online it will remove the unwanted files and it will upload the main folders and projects only

package-lock. json -- when we installing a file what are the versions are installed it will show the detailed view and their installed links

Package.json--what are the dependencies we are installing and what are the dependencies installed in this packages that will show here

Coding

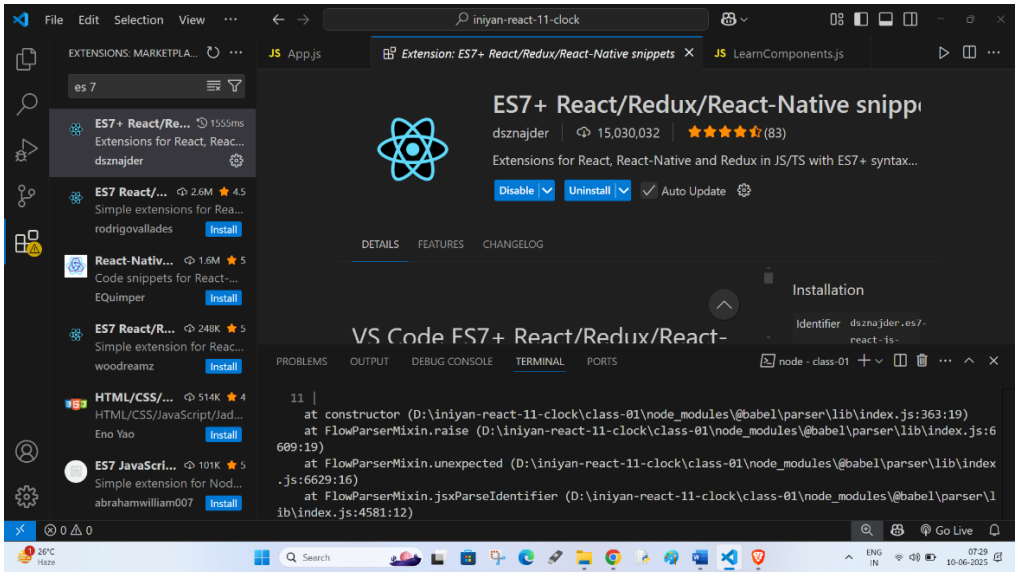
Every div will return only one Child only

Fragment tag is used as a component to show multiple files

If we cannot used this we can use a empty fragment <>

</> ----------These symbols are known as Fragments

We need to install an Extension used to get a Default code Snippets



We need to create a new Simple component used to by typing **rafc**