

Building your first reactApp

# My first ReactApp

- To get an overview of what React is, you can write React code directly in HTML (like we have been doing for the past 2 weeks)
- The server-less setup allowed us to get familiarized with React without any installations or firing up a server. But as you may have noticed, it's good neither for development nor for production. During development, some additional time is introduced for loading the scripts from a CDN.
- Moreover, on production, especially in larger projects, runtime compilation of JSX to JavaScript will slow down the page loading and affect user experience.
- But in order to use React in production, you need npm and [Node.js](https://nodejs.org/) installed.

# Project Setup –without nvm (not recommended)

- First: download [node](#).js installer. The Node.js installer includes the NPM package manager
- Second: Install Node.js and NPM(node package manager)
- check if installed

Command	Output
npm - -version or npm -v	Output npm version
node --version or node -v	Outputs node version

# What is Node.js and npm?

- **Node.js** is a run-time environment which includes everything you need to execute a program written in JavaScript. It's used for running scripts on the server to render content before it is delivered to a web browser.
- **NPM** stands for Node Package Manager, which is an application and repository for developing and sharing JavaScript code See: <https://www.npmjs.com/>

Npm helps you install libraries, plugins, frameworks and applications.

# Create React App

- To learn and test React, you should set up a React Environment on your computer.
- The **create-react-app** tool is an officially supported way to create React applications.
- Node.js is required to use create-react-app. (MAKE SURE IT IS INSTALLED)
- Open your terminal in the directory you would like to create your application.
- Run this command to create a React application named my-react-app:

```
npx create-react-app my-react-app
```

# Folder Structure

- After creation, your project should look like this:
- For the project to build, **these files must exist with exact filenames:**
  - public/index.html is the page template;
  - src/index.js is the JavaScript entry point
- You need to put any JS and CSS files inside src
- node\_modules is where npm modules are saved.
- 

```
my-app/  
  README.md  
  node_modules/  
  package.json  
  public/  
    index.html  
    favicon.ico  
  src/  
    App.css  
    App.js  
    App.test.js  
    index.css  
    index.js  
    logo.svg
```

# Package.json

- Metadata associated with project + All Dependencies with version + scripts
- See : <https://www.c-sharpcorner.com/article/react-introduction-to-package-json-file/>
- The *package.json* file is the heart of any Node project. It records important metadata about a project which is required before publishing to NPM, and also defines functional attributes of a project that npm uses to install dependencies, run scripts, and identify the entry point to our package.

# To start the reactApp

- `cd my-react-app`
- `npm start`
  
- ....YOU ARE ALL SET