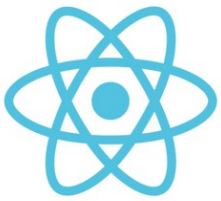
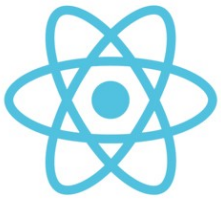


Introduction of React JS

- **Introduction :**
  - **React** is a free and open-source **front-end JavaScript library** for building **reusable** user interfaces based on components.
  - It is maintained by **Meta** (formerly Facebook) and a community of individual developers and companies.
  - It was created by **Jordan Walke**, a software engineer at the Facebook.
  - The React was **first deployed** for Facebook's Newsfeed application in **2011**, and then deployed for Instagram.com in **2012.**
  - It was open-sourced at JSConf US in **May 2013**.
  - React can be used to develop **single-page, mobile, or server-rendered applications** with frameworks like **Next.js**.
  - Because React is only concerned with the user interface and rendering components to the DOM, React applications often rely on libraries for routing and other client-side functionality.



Setup React Environment

1. Step 1: Install Node.js

- Node.js is a JavaScript **runtime environment** that is required to run React because React apps are built using Javascript & Node.js provides the environment to execute JS code on **the server-side.**
- so make sure you have it installed on your computer. You can download the **latest version** of Node.js from the official website: **https://nodejs.org**
- **Set Environment Path :**
    - **(C:) Drive => Program files => nodejs => (Copy path)**
    - Open **Edit system environment variables => Environment variables => Path => New => (Paste Copied path)**
    - **Restart your Device**

Note : If you are Run the React App first time in your PC or Laptop…. this steps are required….

- Open **Windows Powershell**
- Run Command :
    1. **Set-ExecutionPolicy RemoteSigned**
    2. **Set-ExecutionPolicy Restricted**
    3. **Set-ExecutionPolicy RemoteSigned -Scope CurrentUser**

2. Step 2: Install VS Code

- List of popular IDEs(Integrated Development Environment) for React Development,
    - Visual Studio Code (VS Code)
    - WebStorm
    - Atom
    - Sublime Text

- Best IDE for React development varies based on personal preference and VSCode is best.

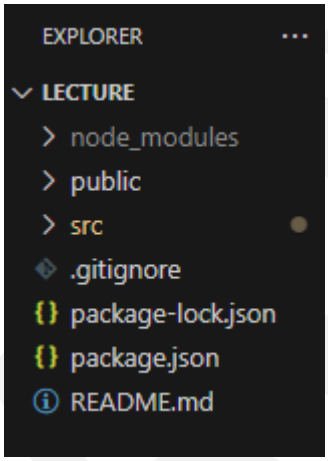
3. Step 3: Create React App

- Create React App is a comfortable environment for learning React, and is the best way to start building a new single-page application in React.

```
npx create-react-app my-app
cd my-app
npm start
```

React Folder Structure

- A typical React project follows a common folder structure that organizes the codebase.



- **src:**
  - This is the main folder where most of your project's code resides.
    - **index.js:** The entry point of your application.
    - **App.js:** The root component that gets rendered in the browser.
    - **components:** This folder contains reusable and smaller components used in the project.
    - **pages:** This folder contains larger components that represent different pages or views of your application.
    - **styles:** CSS or styling-related files, including global styles and component-specific styles.
    - **assets:** Static assets such as images, icons, or fonts used in your application.
    - **utils:** Utility functions or helper modules that are used throughout the project.
    - **services:** This folder holds any services or API-related files.

- **public:**
  - This folder contains static assets that don't require processing, such as the HTML file.

- **node_modules:**
  - It is automatically created when you install dependencies.

- **package.json:**
  - This file lists the project's metadata and dependencies, including scripts for running various tasks.

- **Package-lock.json:**
  - These files are automatically generated and lock the versions of your installed dependencies, ensuring consistent builds across different machines.

- **.gitignore:**
  - This file specifies which files or directories should be ignored by version control (e.g., Git).

- **README.md:**
  - A file containing information about the project.