***NAME: HUZAIFA SHAHID***

***GROUP: ALI HAIDER***

***REPORT #: W:6,D:1***

***TASK TITLE Introduction to React, create-react-app setup***

### ⚛️ Introduction to React

**React** is a **JavaScript library** used to build **interactive user interfaces**, mainly for single-page applications (SPAs).

**🧠 Key Features of React:**

* **Component-based**: UI is broken into reusable parts.
* **JSX Syntax**: Combines HTML + JavaScript.
* **Virtual DOM**: Efficient rendering of UI.
* **One-way data flow**: Predictable app behavior.

**🛠️ create-react-app Setup**

create-react-app is a tool that sets up a ready-to-use React project with zero configuration.

**✅ Steps to Create a React App:**

1. **Install Node.js** (if not installed):  
   https://nodejs.org/
2. **Install Create React App** (Optional global):

npm install -g create-react-app

1. **Create a new project**:

npx create-react-app my-app

1. **Navigate into project folder**:

cd my-app

1. **Start the development server**:

npm start

**📁 Project Structure Overview:**

| **Folder/File** | **Purpose** |
| --- | --- |
| src/ | Source code (components, CSS) |
| public/ | Static files (HTML, favicon) |
| App.js | Main component |
| index.js | Renders the app to the DOM |