

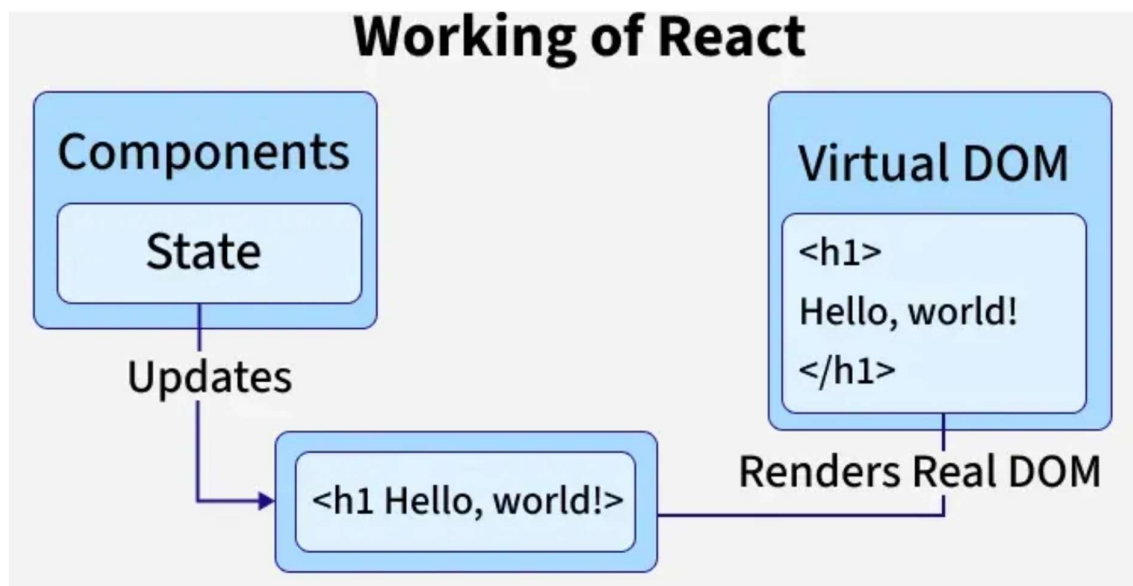
# React JS

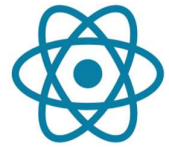
## Introduction of React JS :-

- ReactJS is an **Open-Source JavaScript library** for building **user interfaces**, especially for web application.
- It was created by **Facebook (now Meta)** and is maintained by Facebook and a community of individual developers.
- It is used to create **Single-Page Application (SPA)** with fast and dynamic UI updates.
- React **focuses** only on the **view layer** (The part users see & interact with).

## History of React JS :-

- **2011** – Created by **Jordan Walke**, a Software Engineer at Facebook.
- **2013** – React was released as an **open-source project**.
- **2015** – **React Native** (for mobile apps) was introduced.
- **2020+** – Major improvements like **Hooks**, **Concurrent Mode** and **Server Components**.



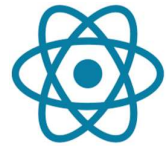


## Features of React JS :-



### Flow of Features :-

1. Component-Based Architecture
2. Virtual DOM
3. JSX (JavaScript XML)
4. One-Way Data Flow
5. Declarative Programming
6. Reusable Components
7. Fast Rendering



## **Why React Became Popular :-**

- Component-based architecture
- Fast rendering with Virtual DOM
- Reusable UI components
- Strong Facebook backing
- Large community & ecosystem
- Works for web + mobile (React Native)

## **Core Concepts (Learn in this Order)**

1. JSX – JavaScript XML
2. Components (Functional vs Class)
3. Props – Passing data
4. State – Use State Hook
5. Event Handling
6. Conditional Rendering
7. Lists and Keys

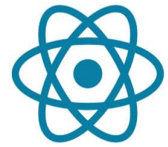
## **Installation and First App :-**

### **1. Check node and npm version –**

**Step 1 : First we can check version of node and npm –**

```
C:\Users\HP>node -v
v24.11.1

C:\Users\HP>npm -v
11.6.2
```



## Step 2 : Install Node.js and npm –

Download Node.js – Click on <https://nodejs.org/en/download>

Or get a prebuilt Node.js® for Windows running a x64 architecture.

 **Windows Installer (.msi)**

 **Standalone Binary (.zip)**

Read the [changelog](#) or [blog post](#) for this version.

Learn more about [Node.js releases](#), including the release schedule and LTS status.

Learn how to [verify](#) signed SHASUMS.

Looking for Node.js source? Download a signed [Node.js source](#) tarball.

Check out our [nightly](#) binaries or all [previous releases](#) or the [unofficial](#) binaries for other platforms.

Select Windows Installer (.msi)

Then After installation check again version of node and npm.

## 2. Create reactapp using command :-

**Old - npx create-react-app myapp**

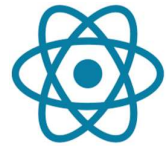
**cd myapp**

**npm start**

**Latest - npm create vite@latest myapp**

**cd myapp**

**npm run dev**



## Step 1 : Select **React** framework -

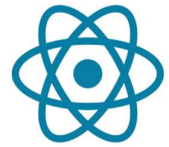
```
C:\Users\HP\OneDrive\Desktop\React_example> npm create vite@latest myapp

> npx
> create-vite myapp

|
◆ Select a framework:
  ● Vanilla
  ○ Vue
  ○ React
  ○ Preact
  ○ Lit
  ○ Svelte
  ○ Solid
  ○ Qwik
  ○ Angular
  ○ Marko
  ○ Others
```

## Step 2 : Select **JavaScript** variant -

```
◆ Select a variant:
  ○ TypeScript
  ○ TypeScript + React Compiler
  ○ TypeScript + SWC
  ● JavaScript
  ○ JavaScript + React Compiler
  ○ JavaScript + SWC
  ○ React Router v7 ↗
  ○ TanStack Router ↗
  ○ RedwoodSDK ↗
  ○ RSC ↗
  ○ Vike ↗
```



**Step 3 : Select No -**

```
◆ Use rolldown-vite (Experimental)?:  
  ○ Yes  
  ● No
```

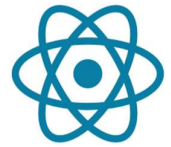
**Step 4 : Select Yes -**

```
◆ Install with npm and start now?  
  ● Yes / ○ No
```

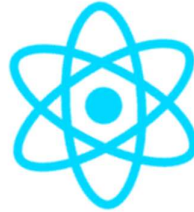
```
◆ Scaffolding project in C:\Users\HP\OneDrive\Desktop\React_example\myapp...  
|  
◆ Installing dependencies with npm...  
  
added 157 packages, and audited 158 packages in 56s  
  
33 packages are looking for funding  
  run `npm fund` for details  
  
found 0 vulnerabilities  
|  
◆ Starting dev server...  
  
> myapp@0.0.0 dev  
> vite
```

```
VITE v7.3.0 ready in 1003 ms  
  
→ Local:   http://localhost:5173/  
→ Network: use --host to expose  
→ press h + enter to show help
```

**Then it can show server and version**



**Step 5 : Click on Server - <https://localhost:5173/>**



# Vite + React

count is 0

Edit `src/App.jsx` and save to test HMR

Click on the Vite and React logos to learn more