**React**

**Introduction:**

* React is an open-source JavaScript library for building user interfaces.
* React is used to build single page applications.
* Instead of manipulating the browser’s DOM directly, react creates a virtual DOM in memory, where it does all the necessary changes, before making the changes in the browser DOM.

**History:**

* React is created by Facebook.
* React.JS was first used in 2011 for Facebook’s Newsfeed feature.
* Facebook Software Engineer, Jordan Walke created it.
* The first version of react (V0.3.0) was released in 2013.
* The latest version of react is (V18.2.0).

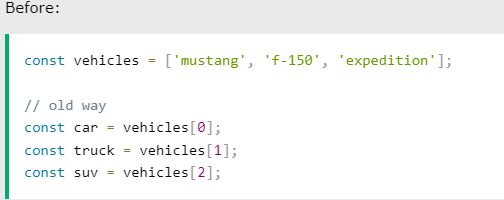
**React ES6:**

* ECMAScript6 is the 6th version of JavaScript created to standardize JavaScript in 2015 and is also known as ECMAScript 2015.
* React uses ES6 as it introduced the following features:

1. ***classes*** *concept.*
2. ***arrow******functions****.*
3. ***let*** *and* ***const*** *variable declaration.*
4. *array methods like .****map****().*
5. ***destructuring.***
6. ***spread operator****.*
7. ***modules****.*
8. *ternary operator. {if else = ? :}*

**Destructuting:**

**Destructuring makes it easy to extract exactly what we need from an array or an object.**

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**Spread Operator:**

**The JS operator (. . .) allows us to quickly copy all or part of an existing array or object into another array or object.**

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**Modules:**

* ES6 modules allow us to break up our code into separate files.
* ES6 modules rely on **import** and **export** statements.
* We can export a function or a variable from any file.
* There are two types of exports **Named** and **Default**.

**Named exports:**

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**Default exports:**

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**Imports**

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**React Environment Setup:**

* Before we start with **React.js** we need to have **Node.js** installed in our system as **React.js** is a JavaScript library and **Node.js** is the **runtime environment** that allows us to run JavaScript on the server side.
* Download latest version of Node.js here: [Link](https://nodejs.org/en/download)
* After successfully installing verify the installation by entering the following **command** in command prompt: **node -v**
* If Node.js is installed correctly then you will be able to see a version of Node.js or else, you will get an error.
* We also require a **code editor** to work with our code and one of the most used **code editors** is **VS Code.**
* Download latest version of VS Code here: [Link](https://code.visualstudio.com/download)
* Now create a react app by using the following command inside your directory: **npx create-react-app app\_name**
* This will create a react app and we can start working on **React.js.**