What is React ?

A JS library for building user interfaces ( to make user interfaces easier and faster )

Breaking apps into components

React combines HTM, CSS, JS into a single component, so each component has its own functionality, style and content to control. And you can repeat these components with different style,…

Each component get updates automatically without need of refreshing the page, so seems more interactive and faster. By oding comparison btw old and new dom tree

The difference between Library and Framework?

The terms "library" and "framework" are often used in the context of software development, but they refer to different concepts. Here's a brief explanation of each:

1. Library:

A library is a collection of pre-written code or functions that can be reused by other programs.

It typically consists of a set of functions, procedures, and classes that can be used to perform specific tasks without the need to write the code from scratch.

Libraries are generally focused on providing specific functionality or solving particular problems.

Developers can include a library in their code and use its functions as needed.

1. Framework:

A framework is a more comprehensive and structured set of tools, libraries, and conventions that provide a foundation for building software applications.

Unlike libraries, which are more like a set of functions, frameworks often dictate the overall structure and flow of an application.

Frameworks provide a skeleton or scaffolding that developers can build upon, enforcing a certain architecture or design pattern.

They are more opinionated and tend to guide the developer in terms of how to organize and structure their code.

Introduction to JSX and Babel

Some basic definitions :

1. What does self-contained mean?

Something that is complete and independent, requiring little or no external assistance or dependencies. We have self-contained code and module ( the key definition is they should not heavily rely on external factors or dependencies, except explicitly specified or imported.

1. What is a module :

Refers to a self-contained unit of code that performs a specific set of functions. Modules are used to organize code, improve maintainability and facilitate code resue.

ES6

// math.js

export const add = (a, b) => a + b;

export const subtract = (a, b) => a - b;

// main.js

import { add, subtract } from './math';

console.log(add(5, 3)); // Output: 8

console.log(subtract(8, 3)); // Output: 5

NODE.JS(COMMONJS modules)

// math.js

const add = (a, b) => a + b;

const subtract = (a, b) => a - b;

module.exports = {

add: add,

subtract: subtract

};

// main.js

const mathModule = require('./math');

console.log(mathModule.add(5, 3)); // Output: 8

console.log(mathModule.subtract(8, 3)); // Output: 5

1. Require() function:

function is part of the CommonJS module system, which is a module system for the JavaScript programming language. It is used to import external modules or libraries into a JavaScript file

import React from 'react';

import ReactDOM from 'react-dom';

These two syntaxes achieve the same goal: importing external modules into your code.

In modern JavaScript and in the context of browser-based development, the **import** statement is often used for module imports, especially when working with ECMAScript modules (ESM).

React works by creating JSX files, files we have html inside the JavaScript file (which was not possible before). How ?

The html is picked up by a compiler and it gets converted or compiled down to actual JavaScript, and the compiler comes from including the react module.

1. Bable :

Inside React module, there is Bable, which is a JavaScript compiler. Takes next generation of JS like ES6,7,8 and compile them down to a version that every browser can understand. Also includes compiling down JSX to old plain JS.

So because we imported react at the beginning, we don’t need to worry about if someone is using old browser and won’t be able to compile the new JS OR ES6.

Because react ahs bable .