MERN Stack

Phase 2 : Notes

26—7-2021

Day 1

DOM

**JavaScript**

**gitignore**

.gitingore

node\_modules

documents.txt

**JavaScript concept**

**DOM**

**Interact with user**

**DOM :** Document Object Model

**index.html**

<html>

<head>

<title>This is my web page</title>

</head>

<body>

<p>Welcome to HTML Web Page</p>

</body>

</html>

DOM Hierarchy generate in browser memory.

Html

Head body

Title p

textNode textNode

This is my web page Welcome to HTML Web Page

**DOM API :** Document Object Model Application interface.

All programming language like Java, Python, Asp.net as well as JavaScript which provide set of function or methods or classes which help to read, write and update html contents dynamically.

React JS: React JS a open source JavaScript library which help to create web application or pages using components.

Component is use to control the view or part of the view on web page.

For Example

Before React JS and Angular Framework

In multi page application whole page loaded once again in browser ie DOM.

**Index.html welcome.html**

Hyperlink

Submit

Button

Using

JavaScript

**AJAX : Asynchronous JavaScript and XML.**

**SPA (Single Page Application)**

Using SPA rather than loading whole page (DOM) we can load the part of the web page.

Angular and React JS is use to create a SPA.

Angular is a framework, Angular framework base upon MVC(Model View Controller). Angular is part of google.

React JS is library. React JS is View in MVC. React JS is a part of Facebook.

Library provide set of function to read, write and update the DOM(HTML Tags contents) elements. Library is not standard. Library is focus on only one type of task. Library is light weighted.

Framework contains lot pre-defined API which help to do multipurpose. Framework follow standard (design pattern). The implementation of all design pattern is taken care by framework.

MVC :

Model View Controller

View -🡪 Presentation Logic : Look and feel.

Controller -🡪 Intermediate between Model and View

Model ---🡪 Business logic of the application

Compare Angular why is React JS.

Angular is very heavy framework. React JS is light weighted library. Base upon the application requirements we can add extra library to get features. We can make react JS standard using Redux or flux library. Using React we can create mobile application React Native.

React JS provide Virtual DOM. Angular doesn’t provide. React JS is faster than Angular.

React JS doesn’t support 2 way data binding.

We can create react application using different ways.

1. Using online editor
2. Using Node JS

**Node JS : Node JS is a run time environment for JavaScript library or Framework.**

**With node we will get npm (node package manager).**

**Using npm we can download node js external module.**

To create the React JS Project we have to install the react plugin using npm command.

**npm install –g create-react-app**

create-react-app if one of the node js external module which help to create the react js projects.

Syntax to create the react js project

create-react-app project-name

**create-react-app welcome-app**

Move inside a project folder using command

cd project-name

cd welcome-app

To run the project we have to run the command as

npm start

After compiled project successfully then default browser it open with URL as

<http://localhost:3000>

React JS is base upon the components. Component control the view of part of the view in web page

In React JS we can create the component using different ways

1. Using Normal function style ES5
2. Using arrow function style ES6
3. Using ES6 class style

Creating component using function es5 style

function App() {

}

function MyComponent() {

}

In React Every component return JSX.

JavaScript and XML

Inside HTML we are writing JavaScript code using script tags.

<html>

<head>

</head>

<body>

<script type=”text/JavaScript”>

document.write(“Welcome to JS”)

<h1></h1>

</script>

</body>

</html>

Normal JavaScript function return variable values

function add(a,b) {

var sum = a+b;

return sum;

}

function sayHello() {

Return “Welcome”;

}

In JSX if we want to return any single tag the syntax is

<tagName>Contents </tagName>

If we want to return multiple tags then we have to wrap those tags in outer most tags ie div or any others.

<outerMostTag>

<tagName>Contents </tagName>

<tagName>Contents </tagName>

<tagName>Contents </tagName>

</outerMostTag>

Html, table, div, p, h1 to h6 etc.

All html tags can understand by browser. To run html we no need to install any software.

Using Angular and React JS we are creating user-defined tags with help of components and those component return JSX code.

<MyTag></MyTag>

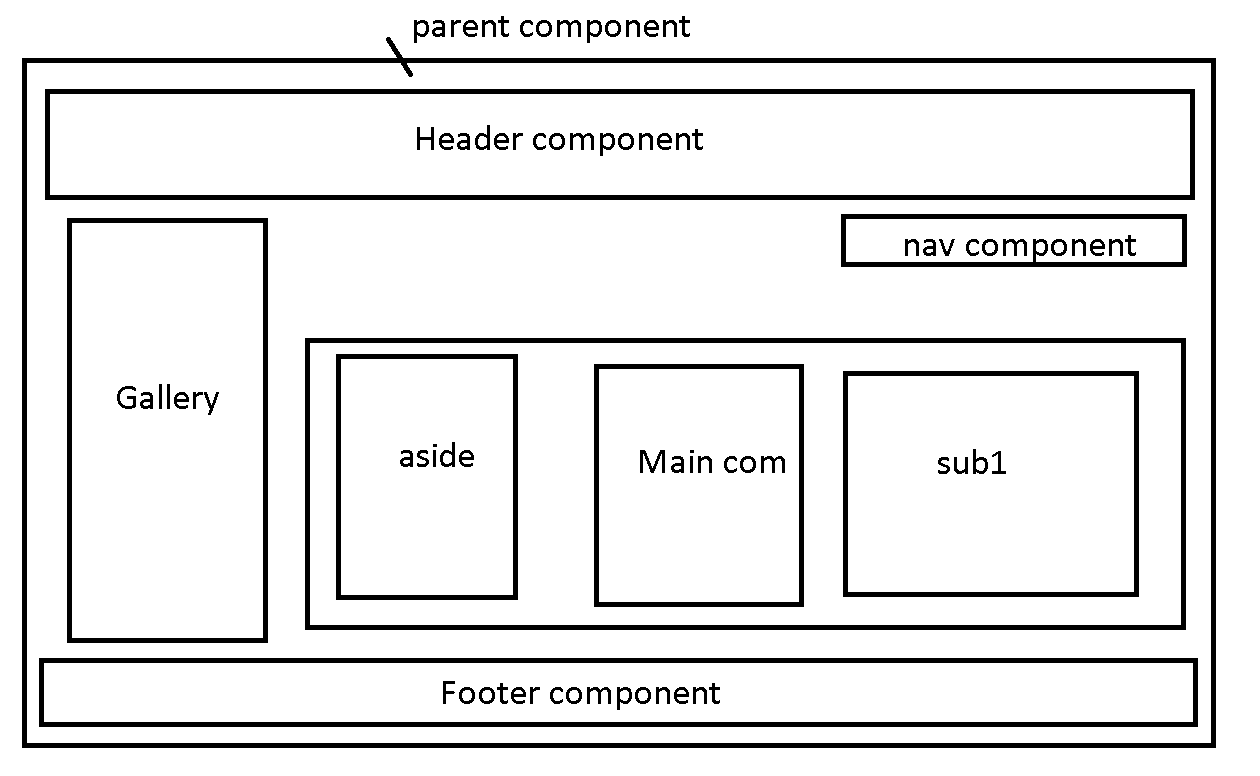
import and export

using import and export we can share function, classes, variable from one file to another files.

React JS provide two pre-defined API

React : This API is use to create the component.

React-DOM : This api is use to pass or send Parent component JSX code to Actual DOM on view side. It provide bridge between React component to Actual DOM.



**ReactDOM.render(<ParentTagName/>,document.getElementById(“root”))**