



INTRODUCTION TO **REACT JS**

**DAY 2 - WEB DEVELOPMENT
MASTERCLASS**



TOPICS COVERED TODAY - OVERVIEW

WEB DEVELOPMENT MASTERCLASS

WHY Javascript ?

Javascript

What is React js ?

Virtual DOM

Vision Mission

React js applications



JAVA SCRIPT

- Dynamic programming language.
- It manipulates both CSS styles and HTML attributes of a page.
- It can also change the content and the way things look in a webpage when a user interacts with it .



PROS OF JAVA SCRIPT

- Speed - Reduced Time of Compilation Compared to other languages
- Interoperability - Works with Other Programming Languages also
- Security - High Secured Environment
- Simplicity - Easy to Learn & Understand
- Low cost - Operational costs lower comparatively



JAVA SCRIPT FRAMEWORKS



- A **JavaScript framework** is a collection of JavaScript code libraries that provide a web developer with pre-written code for routine programming tasks.
- Pre - Written Blocks of **CODES**
- You can **Re- Use Templates** for different applications

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JAVA SCRIPT FRAMEWORK EXAMPLES

Ember

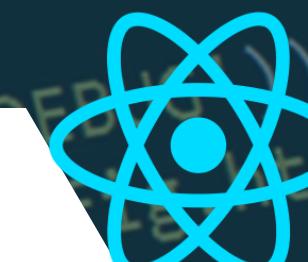


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Angular JS



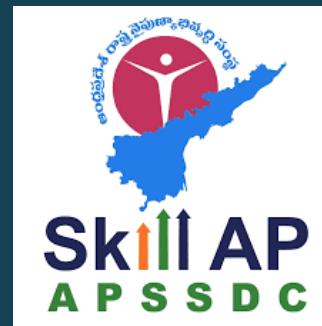
React js applications



React JS

Vue JS

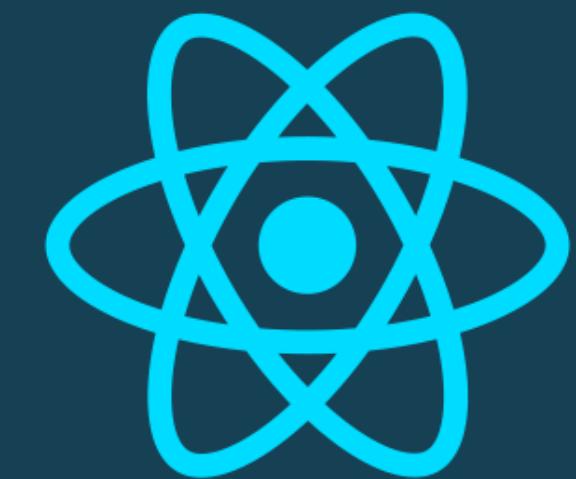




WHAT WE'LL LEARN IN NEXT 15 MINS

DEFINITION OF REACT JS

PRE REQUISITES OF REACT JS



React JS

IMPORTANCE OF REACT JS

FEATURES OF REACT JS

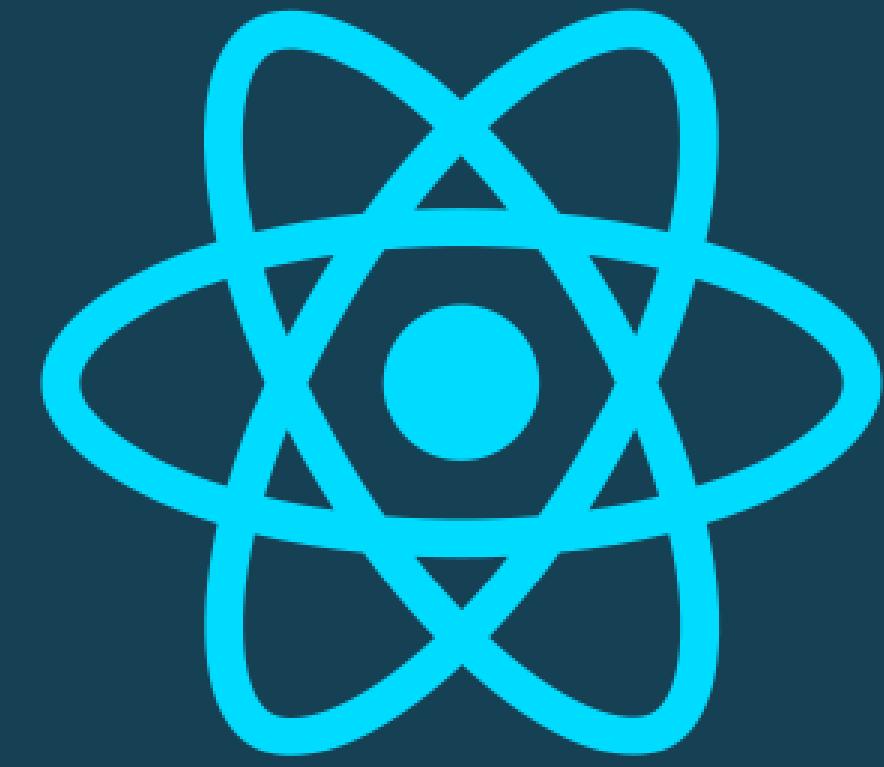
APPLICATIONS OF REACT JS

30 DAYS WEB DEVELOPMENT MASTERCLASS



REACT JS

React is a javascript library for building fast and interactive user interface for the web as well as mobile applications

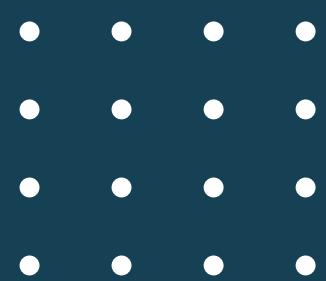
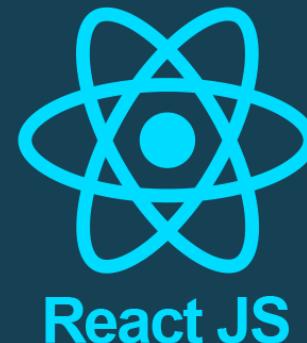


React JS

It is an open-source , reusable component based front end library.

ADVANTAGES OF REACT JS

- Easy to use creation of dynamic web applications
- Enhanced Performance
- Reusable components
- Uni - Directional dataflows
- Easy to Learn - Small learning curve
- Can be used in Mobile Apps
- Debugging - Dedicated tools for easy Debugging.

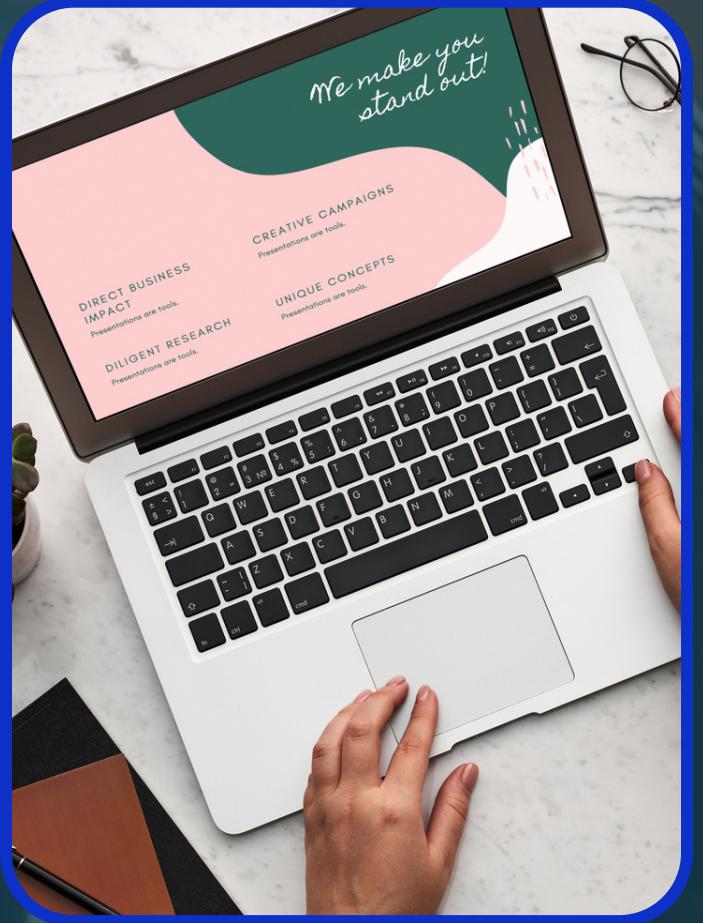


DEFINITION REACT JS WEBSITE DEVELOPMENT





REACT JS IS A



what is front end development

what are various frontend languages

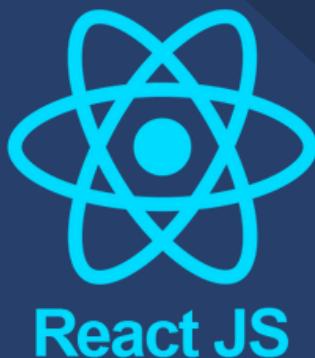


speciality of React js

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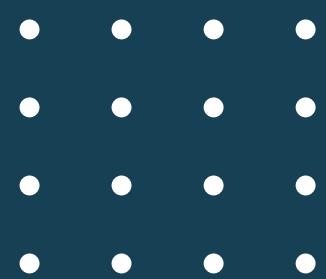
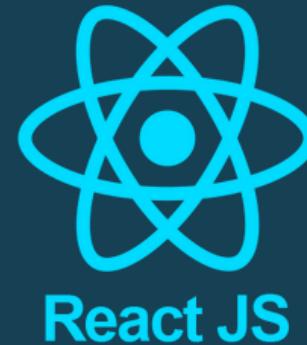
JORDAN WALKE



- 2010 – The first signs of React
- 2011 – An early prototype of React
- 2012 – Something new started at Facebook
- 2013 – The year of the Big Launch
- 2014 – The year of Expansion
- 2015 – React is Stable
- 2016 – React gets mainstream
- 2017 – The year of further improvements
- 2021 – What's up with React now?

IMPORTANCE OF REACT JS

- Easy to use creation of dynamic web applications
- Enhanced Performance
- Reusable components
- Uni - Directional dataflows
- Easy to Learn - Small learning curve
- Can be used in Mobile Apps
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FEATURES OF REACT JS

JSX

One Way DATA BINDING

DOM

EXTENSIONS

Performance

DEBUGGING

**WE WILL BE SEEING THE
FEATURES ONE BY ONE**

**HAVE AN IMPORTANT
ANNOUNCEMENT TO
MAKE**



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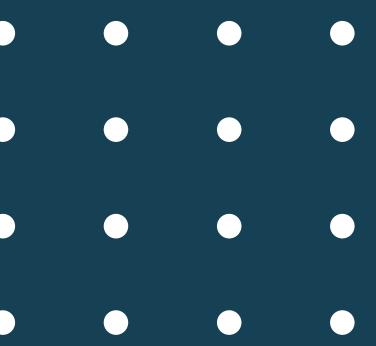
**YOU CAN CONVERT THIS
MASTERCLASS INTO A
CERTIFIED INTERNSHIP**

INTERESTED IN A 1 MONTH
APSSDC CERTIFIED
INTERNSHIP PROGRAM



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30 DAYS WEB DEVELOPMENT MASTERCLASS



BENEFITS OF INTERNSHIP

- **30 DAYS OF LIVE SESSIONS**
- **90 DAYS OF ACCESS TO RECORDS**
- **8 + SOURCE CODES WEB DEVELOPMENT**
- **30 DOWNLOADABLE PRESENTATIONS**
- **6 MENTOR LIVE IN MASTERMIND SESSIONS**
- **APSSDC INTERNSHIP CONFIRMATION LETTER**
- **APSSDC INTERNSHIP CERTIFICATION**





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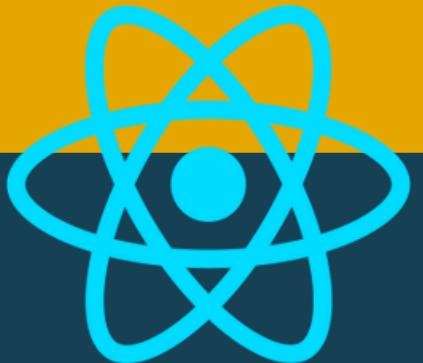
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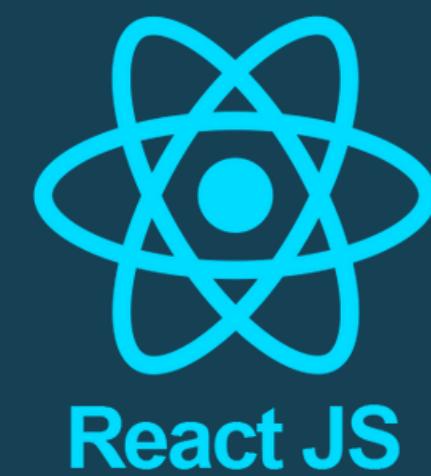
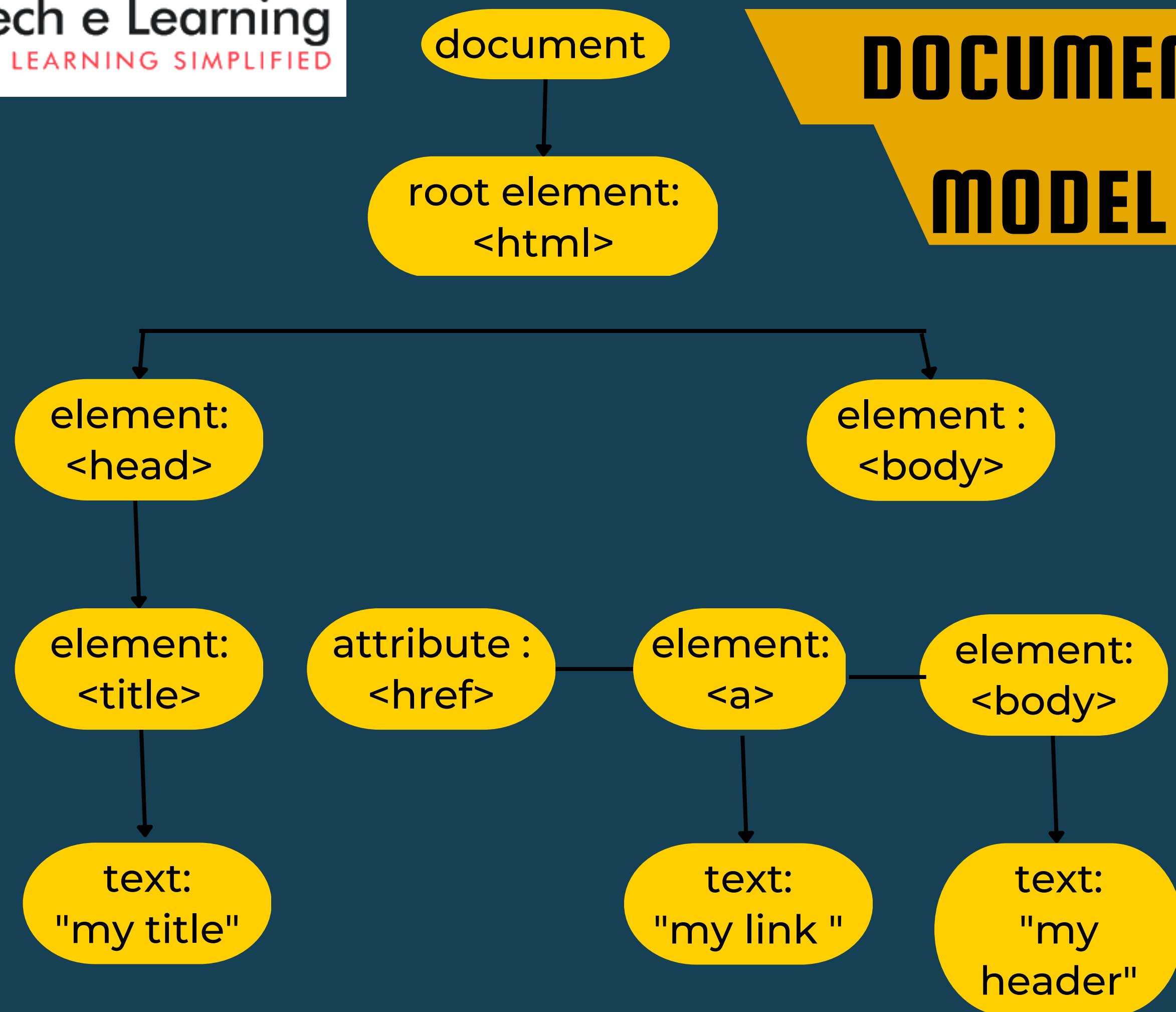
JSX is a syntax extension to JS.

By using JSX,

- You can write HTML structures in the same file that contains JS code
- JSX helps in making the code easier to understand and debug as it avoids usage of JS DOM structures

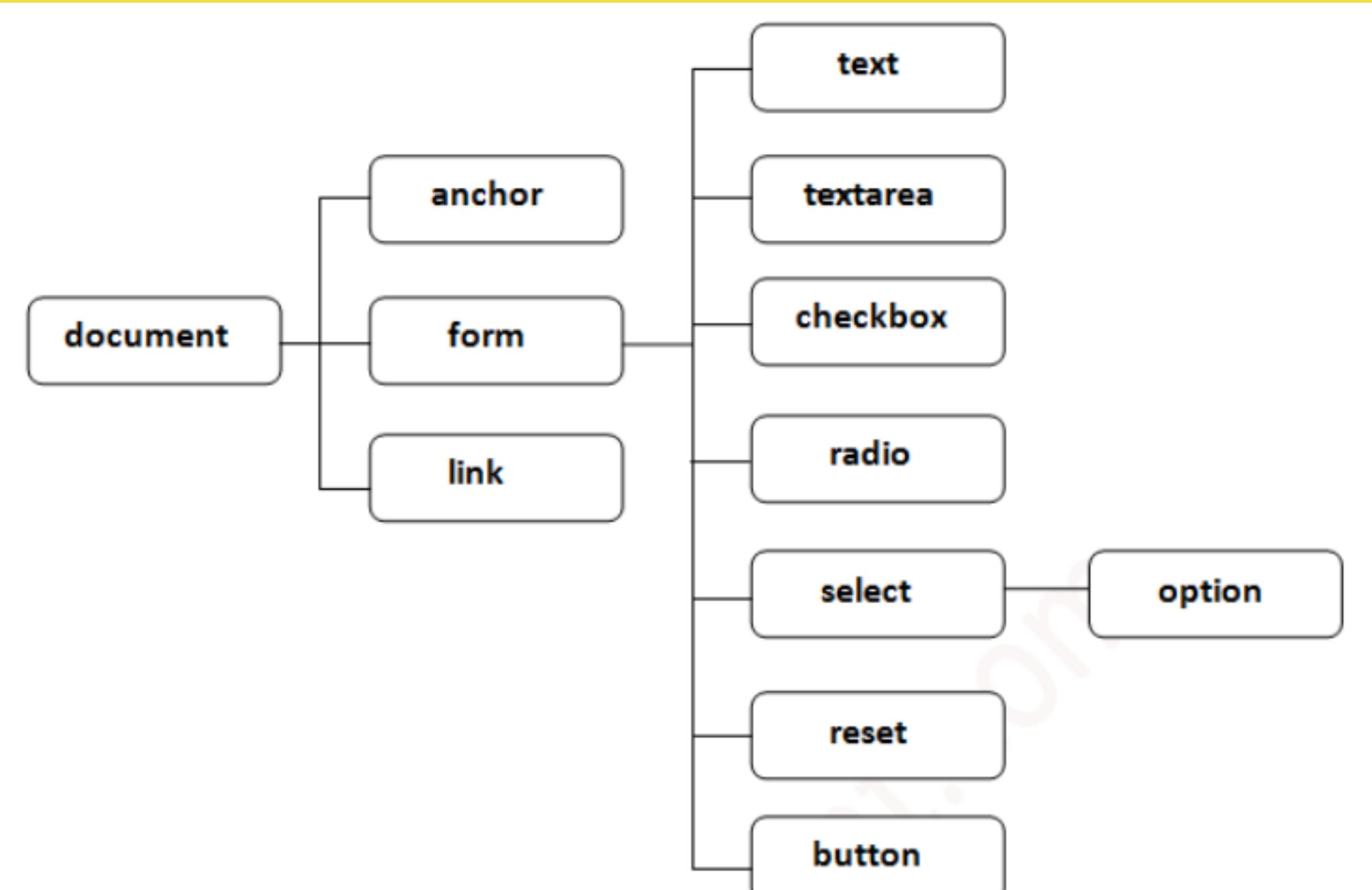
```
const simple = <h1> Hello World!</h1>;
```

DOCUMENT OBJECT MODEL (DOM)



- DOM treats an XML or HTML document as a tree structure in which each node is an object representing a part of the document.
- react keeps a light weight representation of real DOM in the memory and that is known as the virtual DOM.
- manipulating real DOM is much slower than manipulating virtual DOM, because nothing gets drawn on screen.
- when the state of an object changes ,virtual DOM changes only that object in the real DOM instead of updating all the objects.
- virutal DOM and REAL DOM are two types
- the virtual DOM is compared to its previous state and then react gets to know which objects have changed.

“ — PROPERTIES OF DOM

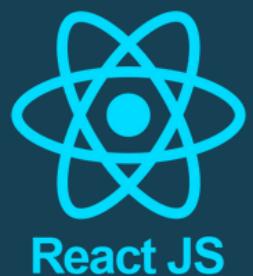


“—> VARIOUS METHODS OF DOM:-

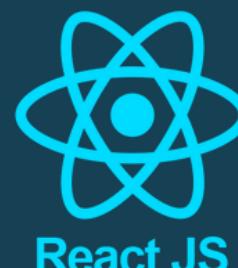
Method	Description
write("string")	writes the given string on the document.
writeln("string")	writes the given string on the document with newline character at the end.
getElementById()	returns the element having the given id value.
getElementsByName()	returns all the elements having the given name value.
getElementsByTagName()	returns all the elements having the given tag name.
getElementsByClassName()	returns all the elements having the given class name.



- The document object represents the whole html document.
- When html document is loaded in the browser, it becomes a document object. It is the root element that represents the html document. It has properties and methods. By the help of document object, we can add dynamic content to our web page.
- As mentioned earlier, it is the object of window. So window.document is same as document .

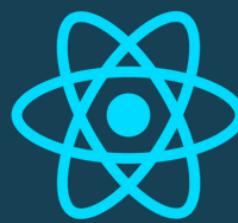


- DOM TREATS AN XML OR HTML DOCUMENT AS A TREE STRUCTURE IN WHICH EACH NODE IS AN OBJECT REPRESENTING A PART OF THE DOCUMENT.
- VIRTUAL DOM IS NOTHING BUT THE EXACT COPY OF THE REAL DOM.
- REACT KEEPS A LIGHT WEIGHT REPRESENTATION OF REAL DOM IN THE MEMORY AND THAT IS KNOWN AS THE VIRTUAL DOM.
- MANIPULATING REAL DOM IS MUCH SLOWER THAN MANIPULATING VIRTUAL DOM, BECAUSE NOTHING GETS DRAWN ONSCREEN.
- WHEN THE STATE OF AN OBJECT CHANGES, VIRTUAL DOM CHANGES ONLY THAT OBJECT IN THE REAL DOM INSTEAD OF UPDATING ALL THE OBJECTS.



VIRTUAL DOM :-

- THE STATES OF THESE OBJECTS HAVE **CHANGED**.
- VIRTUAL DOM IS COMPARED TO ITS **PREVIOUS STATE** AND THEN REACT GETS TO KNOW WHICH OBJECTS HAVE **CHANGED**.



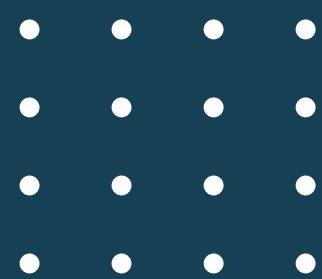
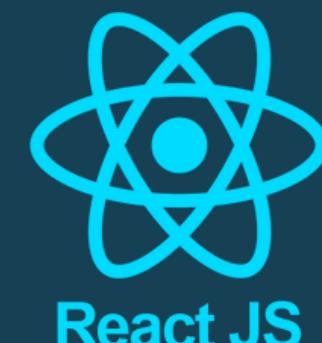
React JS

PERFORMANCE AND ONE WAY BINDING

- REACTS ONE WAY DATA BINDING KEEPS EVERYTHING MODULAR AND FAST.
- A UNI-DIRECTIONAL DATA FLOW MEANS THAT WHEN DESIGNING A REACT APP, YOU OFTEN NEST CHILD COMPONENTS .

EXTENSIONS :-

- REACT GOES BEYOND SIMPLE UI AND HAS MANY EXTENSIONS FOR COMPLETE APPLICATIONS ARCHITECTURE SUPPORT.
- IT PROVIDES SERVER-SIDE RENDERING.
- SUPPORTS MOBILE APP DEVELOPMENT
- EXTENDED WITH FLUX AND REDUX AMONG OTHERS.



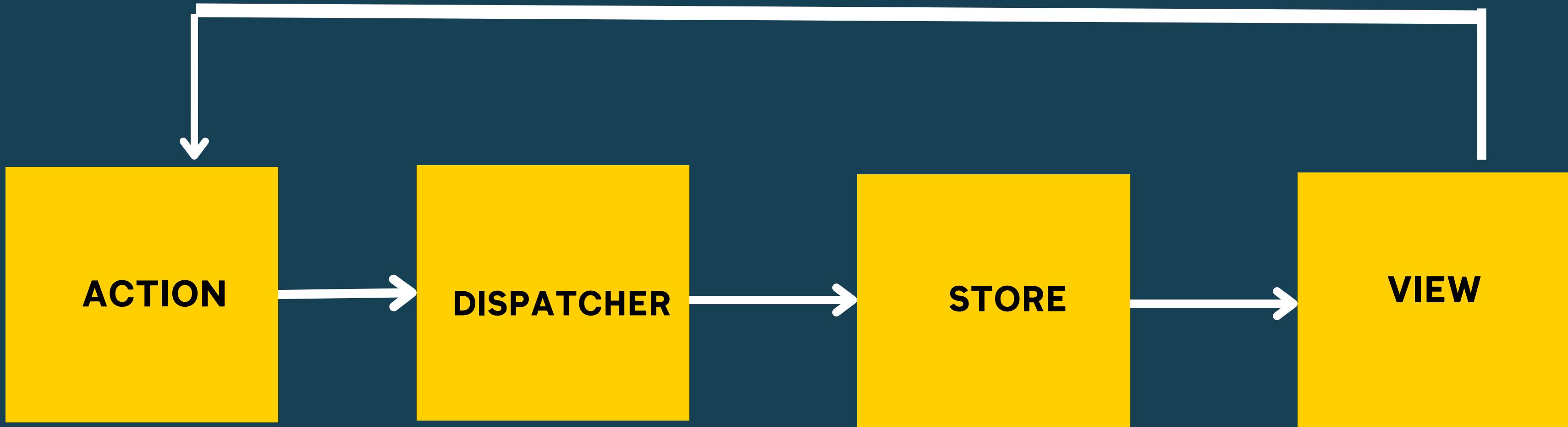
REACT NATIVE

- REACT NATIVE LETS YOU BUILD MOBILE APPS USING ONLY JAVASCRIPT.
- REACT NATIVE APP IS A REAL MOBILE APP AND NOT JUST A WEB APP RUNNING ON MOBILE
- THOUSANDS OF APPS ARE USING REACT NATIVE FROM ESTABLISHED FORTUNE 500 COMPANIES TO NEW STARTUPS.

WHAT IS FLUX ?

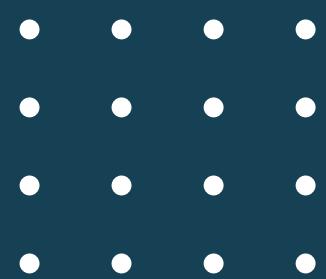
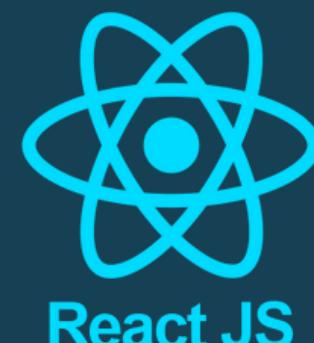
- FLUX IS THE APPLICATION ARCHITECTURE THAT FACEBOOK USES FOR BUILDING WEB APPLICATIONS.
- FLUX IMPLEMENTS UNIDIRECTIONAL FLOW WHICH MAKES IT EASIER TO DEDUCE WHATS GOING ON!

WHAT IS FLUX ?



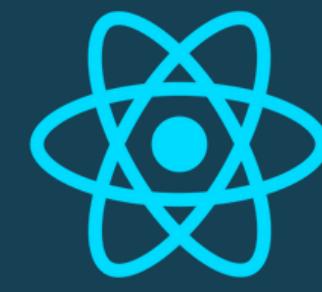
WHAT IS DEBUGGING ?

- REACT APPLICATIONS ARE EXTREMELY EASY TO TEST DUE TO LARGE DEVELOPER COMMUNITY.
- FB EVEN PROVIDES A SMALL BROWSER EXTENSION THAT MAKES REACT DEBUGGING FASTER AND EASIER.



REACT PRE-REQUISITES

- YOU SHOULD BE FAMILIAR WITH PROGRAMMING CONCEPTS LIKE FUNCTIONS, OBJECTS, ARRAYS, AND TO A LESSER EXTENT CLASSES.
- YOU SHOULD HAVE BASIC KNOWLEDGE ON JAVASCRIPT.
- YOU SHOULD HAVE SOME FAMILIARITY WITH HTML.

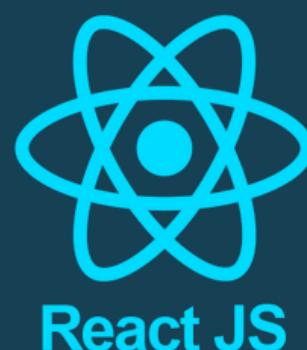


React JS

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INDUSTRIAL TRENDS:-

- REACT DEVELOPERS ARE MOST WANTED & EARN MORE MONEY WHEN COMPARED TO OTHER WEB DEVELOPMENT DEVELOPERS
- A/C TO BASE SCALE THE AVERAGE SALARY FOR A REACT DEVELOPER IS 91 K DOLLARS PER YEAR.
- REACT IS GAINING POPULARITY AND IS BEING ADOPTED BY MANY COMPANIES.



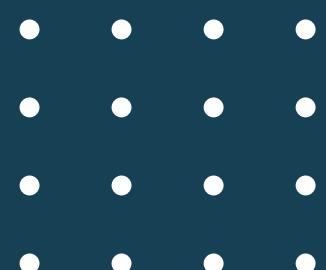
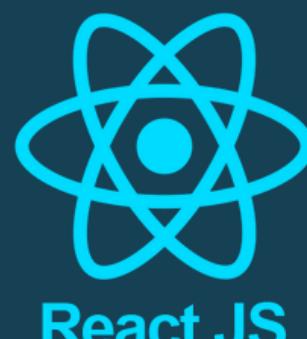
React JS

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SUMMARY

- We have learnt about javascript in detail.
- We learnt about how to react js with its importance

Learnt Basics Terminologies in REACT JS



WEB DEVELOPMENT INTERNSHIP

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ANY QUERIES



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Thank you!