

# REACT JS

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# LOCAL SETUP

Participants must have a laptop/desktop with the following software setup OR must have install privileges on their systems:

Latest chrome browser.

Latest LTS version of Node.js. (<https://nodejs.org/en/download/> )

Latest Visual Studio Code editor  
(<https://code.visualstudio.com/download> )

**Note:** Each participant must be connected to internet throughout the training to be able to download NPM libraries.

# DEVELOPING REACT

**Editors:** VS Code, Webstorm, Sublime Text etc.

**Online Code Playgrounds:** [codepen.io](https://codepen.io),  
[codesandbox.io](https://codesandbox.io), [stackblitz.com](https://stackblitz.com), etc.

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# VS Code Extensions to Install

ESLint

Prettier - Code formatter

Auto Rename Tag

TODO Highlight

Live Server



# LEARNER PREREQUISITES:

HTML Beginner Knowledge

CSS Beginner Knowledge

JavaScript Intermediate Knowledge



# LEARNER MUST KNOW FOLLOWING ES6/ES7 CONCEPTS:

let & const

Template literal

Arrow function

Default function params

Destructuring

Rest parameter

Spread operator

Enhanced object literal

Modules

Promise / async-await

Classes

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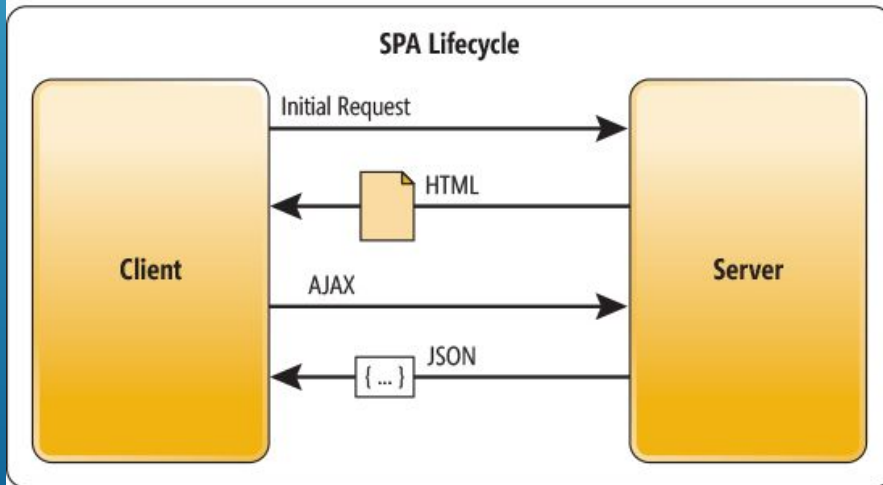
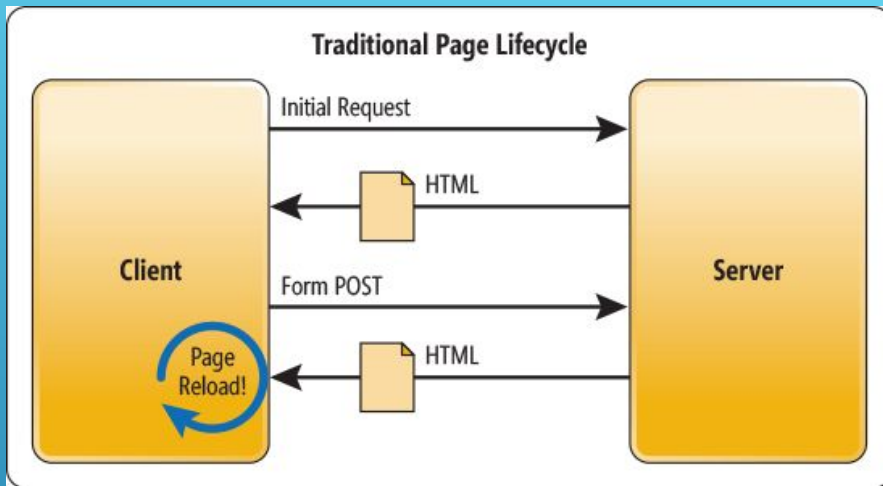
# JS HISTORY

ECMAScript 5 (**ES5**) or ECMAScript 2009

ECMAScript 6 (**ES6**) or ECMAScript 2015

ECMAScript 2016, 2017, 2018, 2019, 2020, 2021

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React was created by Jordan Walke, a software engineer at Facebook.

It was open-sourced at JSConf US in May 2013.

It is maintained by Facebook, Instagram and a community of individual developers and corporations

Current version of react is 18.x



☐ Only show products in stock

Name	Price
------	-------

### Sporting Goods

Football	\$49.99
----------	---------

Baseball	\$9.99
----------	--------

Basketball	\$29.99
------------	---------

### Electronics

iPod Touch	\$99.99
------------	---------

iPhone 5	\$399.99
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Nexus 7	\$199.99
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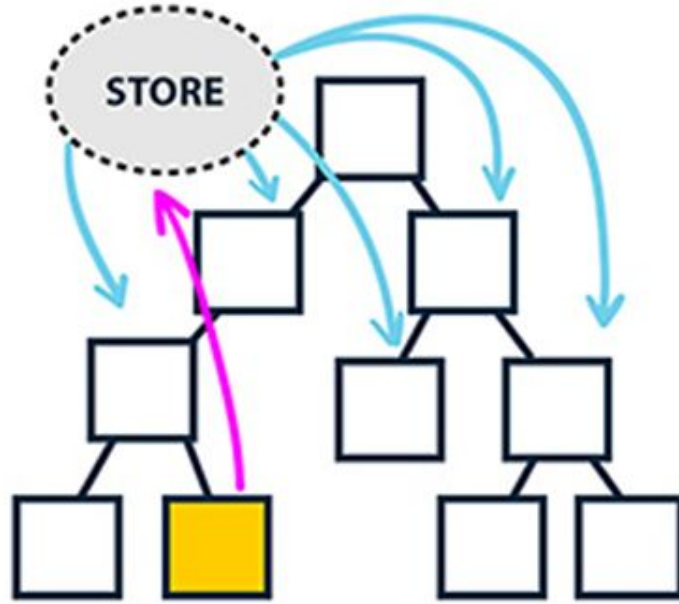
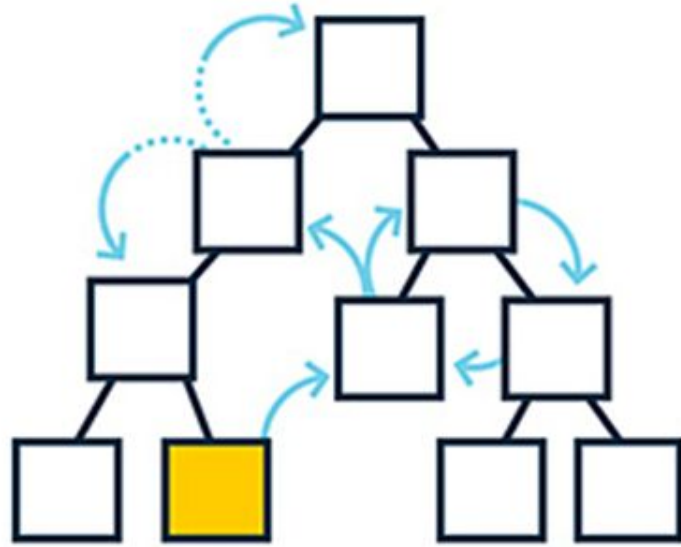
# Details needed to make form controls controlled

Control	Default Value	Change Callback	New Value in Callback
Text	value	onChange	event.target.value
Checkbox	checked	onChange	event.target.checked
Radio	checked	onChange	event.target.checked
Textarea	value	onChange	event.target.value
Select	value	onChange	event.target.value

Specifying initial value to an uncontrolled component in JSX prevents any future updating of the component value.

If initial value has to be specified then use:

- `defaultValue`: in case of text, select & textarea.
- `defaultChecked`: in case of checkbox and radio support



 COMPONENT INITIATING CHANGE

# FUNCTIONAL PROGRAMMING

Functions as first class citizens

Pure functions

Mutability / Immutability

Composition

Declarative vs. Imperative Programming

# FUNCTION WITH NO SIDE EFFECTS MEANS

Does not mutate its arguments (array/object).

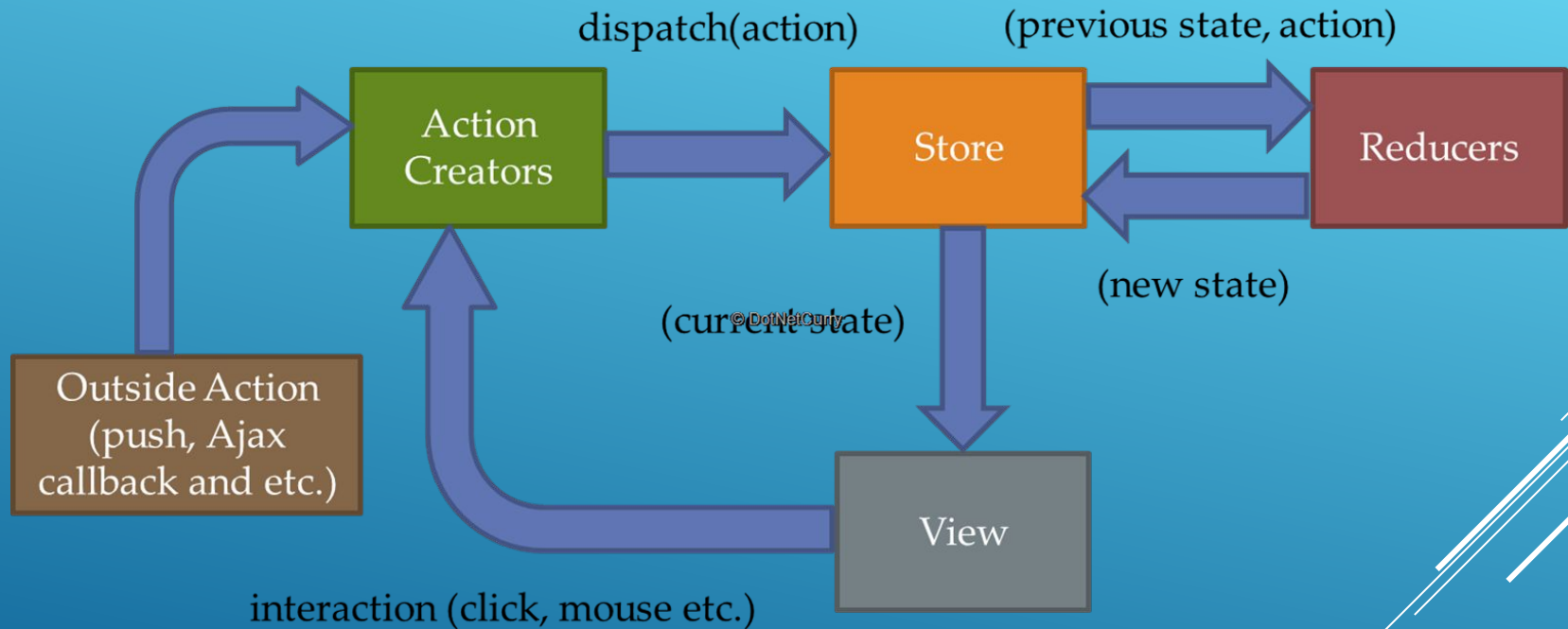
Does not depend or change global variables.

No input/output.

No DB or Network (API) call.

No call to `Date.now()` or `Math.random()`.





# STEPS TO IMPLEMENT REDUX

Create View (UI)

Design Store & Actions

Create reducers with initial state

Create action creators

Test by dispatching actions from redux devtools

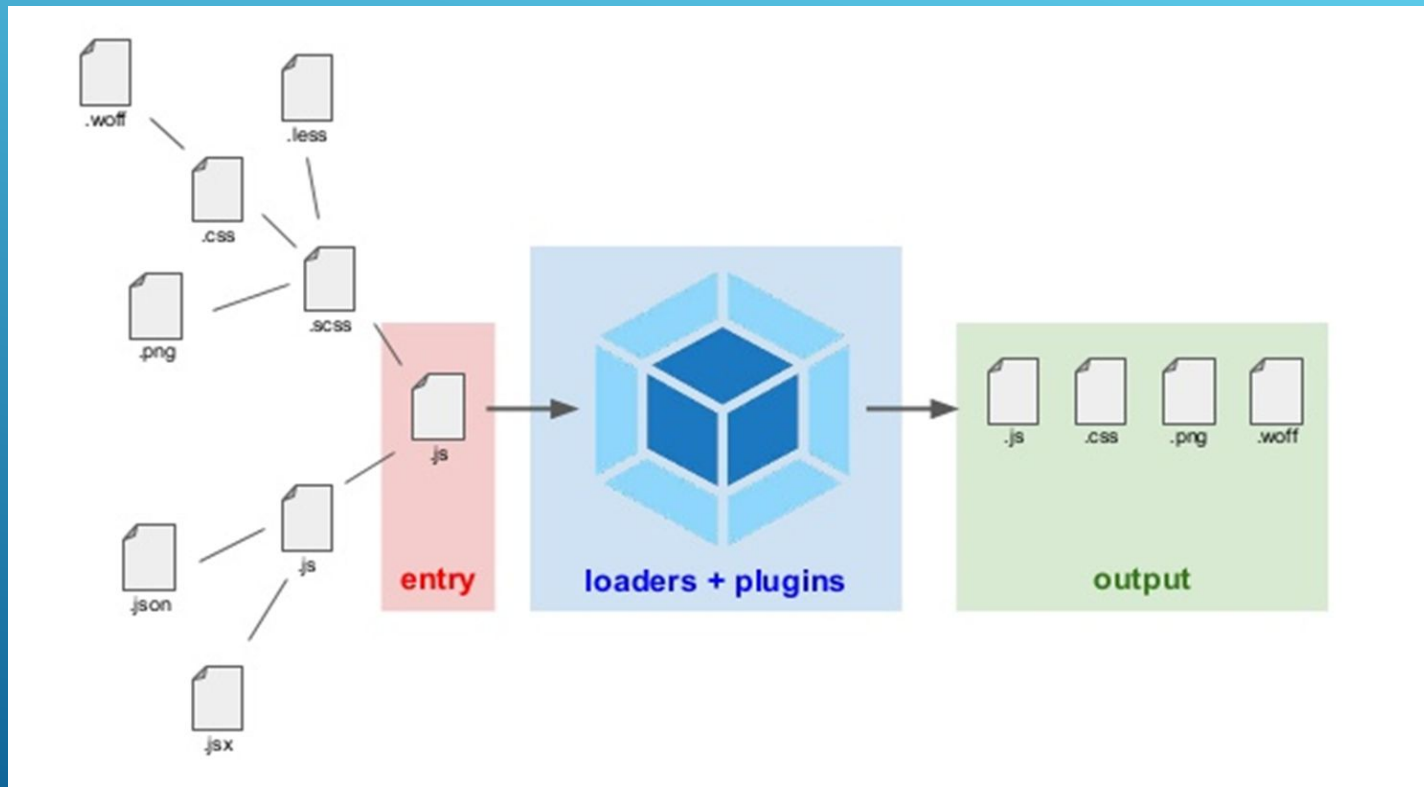
Create store

Bind store to UI

Test binding using redux devtools

Dispatch actions & test the full functionality

# DEPENDENCY GRAPH



END OF CHAPTER



# APPENDIX