



Introduction To **React**



Goal

- What is React
- Who's using React
- Concept of React
- Why React
- Fundamental React
- Build first app using React



Let's Start



What is **React** ?

What is React ?



A Javascript Library for building UI (User Interfaces), not a framework like Backbone, Angular etc, the **V** in **MVC**



Who's using **React** ?

Who's using React ?



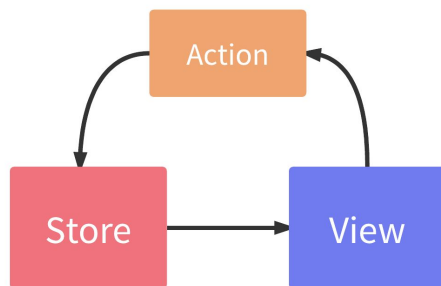
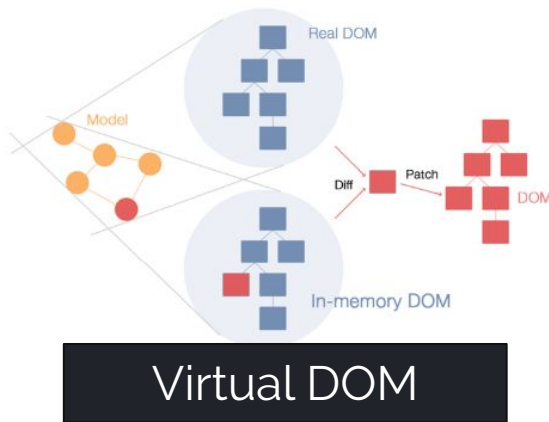
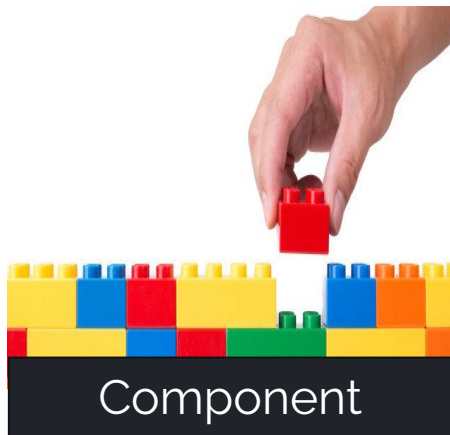
HIJUP





Concept of **React** ?

Concept of React ?



One Way DataFlow



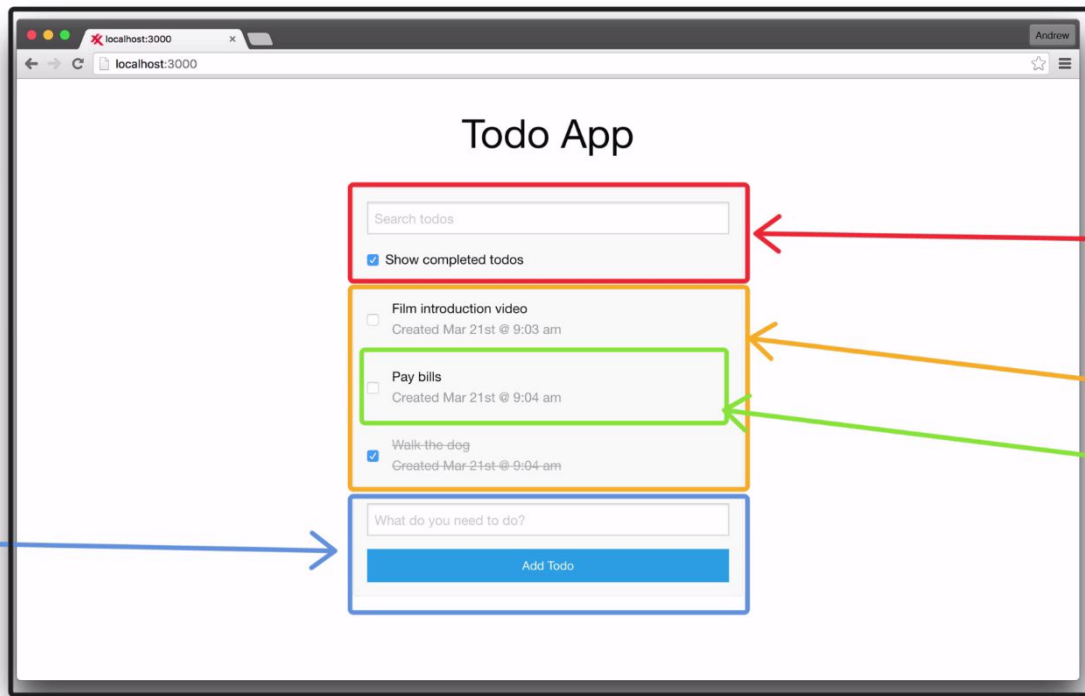
Component ?



Build Component, not template



TodoApp



AddTodo



Todo App

Search todos

☒ Show completed todos

☐ Film introduction video
Created Mar 21st @ 9:03 am

☐ Pay bills
Created Mar 21st @ 9:04 am

☒ Walk the dog
Created Mar 21st @ 9:04 am

What do you need to do?

Add Todo

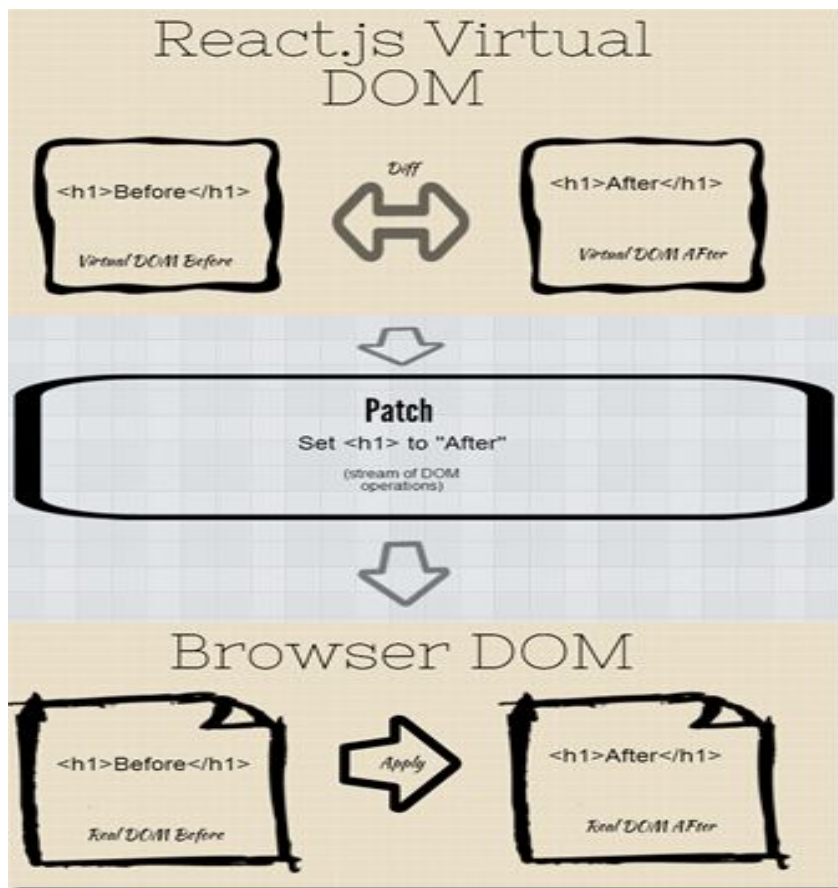
Search

TodoList

Todo



Virtual DOM ?



?

JSX ?



```
<?php
if(isset($_POST['source'])) {
    $source = $_POST['source'];

    if(isset($_POST['type']) && 'php' == $_POST['type']) {
        $code = highlight_string($source, true);
        $output = $code;
    } else {
        $code = htmlentities($source);
        $output = '<pre style="overflow: scroll; padding: 1em; background-color: black; color:
white;">'
            . $code
            . '</pre>' . PHP_EOL;
    }
}
?>
<html>
<head>
    <title>Format code samples for blogger.com</title>
</head>
<body>
<form action="" method="post">
    <textarea name="source" id="Source" style="height: 200px; width: 47%; margin-right: 5%;">
        <?php if(isset($source)): ?><?php echo htmlentities($source); ?><?php else: ?>
            <?php
                phpinfo();
            ?>
        <?php endif;?>
    </textarea>
    <textarea name="output" id="Output" style="height: 200px; width: 47%;;>
        <?php if(isset($output)): ?><?php echo htmlentities($output); ?><?php endif;?>
    </textarea>
    <div style="text-align: center; margin: 1em auto 0 auto;">
        <input <?php if(isset($_POST['type']) && 'php' == $_POST['type']): ?>checked="checked"<?php
endif;?> type="radio" name="type" value="php" />PHP code
        <input <?php if(!isset($_POST['type']) || 'php' != $_POST['type']): ?>checked="checked"<?php
endif;?> type="radio" name="type" value="generic" /> Arbitrary code
    </div>
    <br/>
    <div style="margin: 1em auto 0 auto; width: 20%;">
        <input type="submit" value="&gt;&gt; Convert &gt;&gt;" style="width: 100%;" />
    </div>
</form>

</body>
</html>
```




Controller

```
app.get('/', function(req, res, next) {  
  res.render('index', {nama: 'John'}); // melakukan render dan mengirim data ke index.pug  
})|
```

View

```
html  
  head  
    title Hello Pug  
  body  
    h1 Hello #{nama}
```



```
class Player extends React.Component {  
  render() {  
    return (  
      <div>  
        <h1>Player List</h1>  
        <p>Ini list player  
          <a href="player.com">daftar player</a>  
        </p>  
      </div>  
    )  
  }  
}
```



```
class Player extends React.Component {  
  render() {  
    return (  
      <div>  
        <h1>Player List</h1>  
        <p>Ini list player  
        <a href="player.com">daftar player</a>  
        </p>  
      </div>  
    )  
  }  
}
```

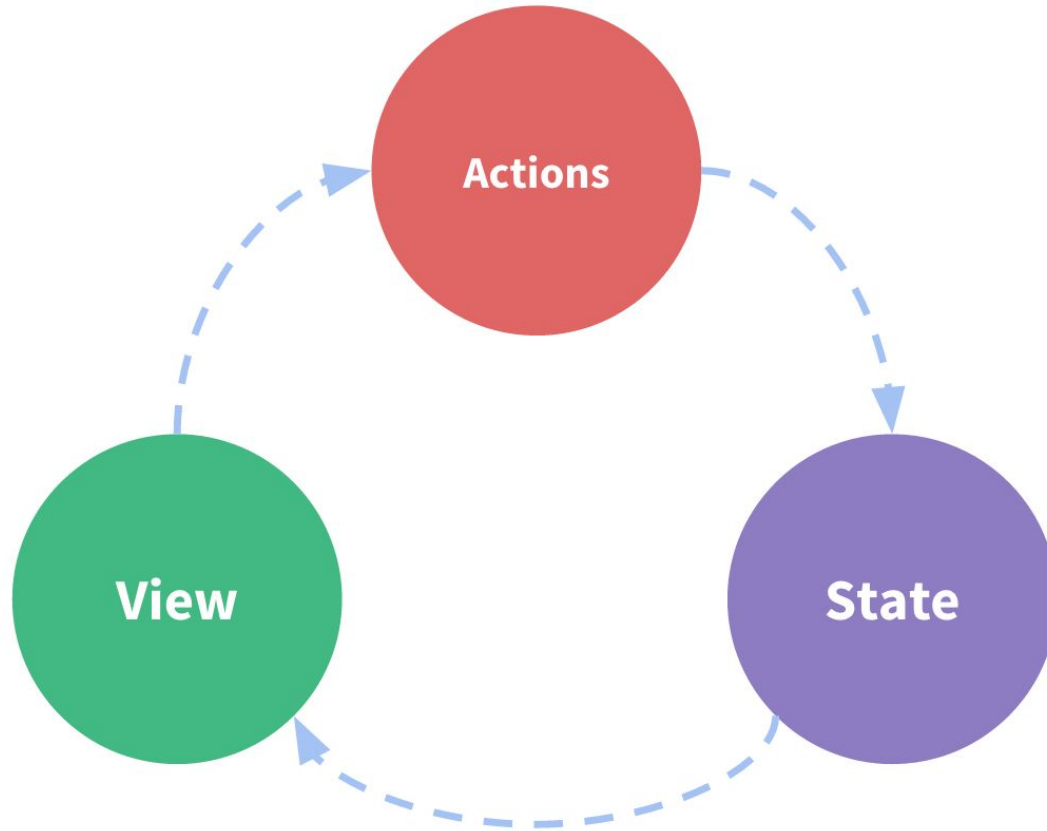


<https://babeljs.io>

```
var Player =  
  /*#__PURE__*/  
  (function(_React$Component) {  
    _inherits(Player, _React$Component);  
  
    function Player() {  
      _classCallCheck(this, Player);  
  
      return _possibleConstructorReturn(  
        this,  
        _getPrototypeOf(Player).apply(this, arguments)  
      );  
    }  
  
    _createClass(Player, [  
      {  
        key: "render",|  
        value: function render() {  
          return React.createElement(  
            "div",  
            null,  
            React.createElement("h1", null, "Player List"),  
            React.createElement(  
              "p",  
              null,  
              "Ini list player",  
              React.createElement(  
                "a",  
                {  
                  href: "player.com"  
                },  
                "daftar player"  
              )  
            )  
          );  
        }  
      }  
    ]),  
    {}  
  })(React.Component);  
  
return Player;  
})(React.Component);
```



One Way DataFlow ?





Why **React** ?



LEARN ONCE, WRITE ANYWHERE



VIRTUAL DOM IS CRAZY FAST!

Makes re-rendering on every change fast



Component Based

Is the future of web development



React dev tools

React Chrome extension make debugging so much easier



Easy to read and understand views



Facebook are maintaining this project



<https://github.com/adam-golab/react-developer-roadmap>



Install React

```
$ npm install -g create-react-app
```

```
$ create-react-app todoapp-devtalk
```



Fundamentals **React**



Component

Represent a piece of UI

Stateless (function)

```
const MyComponent = () => (  
  <div>  
    <h1>Hello MyComponent</h1>  
  </div>  
)  
  
<MyComponent />
```

Statefull (class)

```
class MyComponent extends React.Component {  
  render() {  
    return (  
      <div>  
        <h1>Hello MyComponent</h1>  
      </div>  
    )  
  }  
}  
  
<MyComponent />
```




PROP VS STATE



Props

- Passed down to component from parent component and represents data for the component
- accessed via **this.props**

```
class MyComponent extends React.Component {  
  render() {  
    return (  
      <div>  
        <h1>Hello { this.props.name }</h1>  
      </div>  
    )  
  }  
}
```



```
<MyComponent name="John Due" />
```



State

- Represents internal state of the component
- Accessed via **this.state**
- When a component's state data changes, the rendered markup will be updated by re-invoking render() method

```
class MyComponent extends React.Component {  
  constructor() {  
    super()  
    this.state = { name: "John Due" }  
  }  
  
  handleChangeName = () => {  
    this.setState({ name: "John Legend" })  
  }  
  
  render() {  
    return (  
      <div>  
        <h1>Hello { this.state.name }</h1>  
      </div>  
    )  
  }  
}
```

<MyComponent />



Let's Live Coding



Thanks

Any questions?