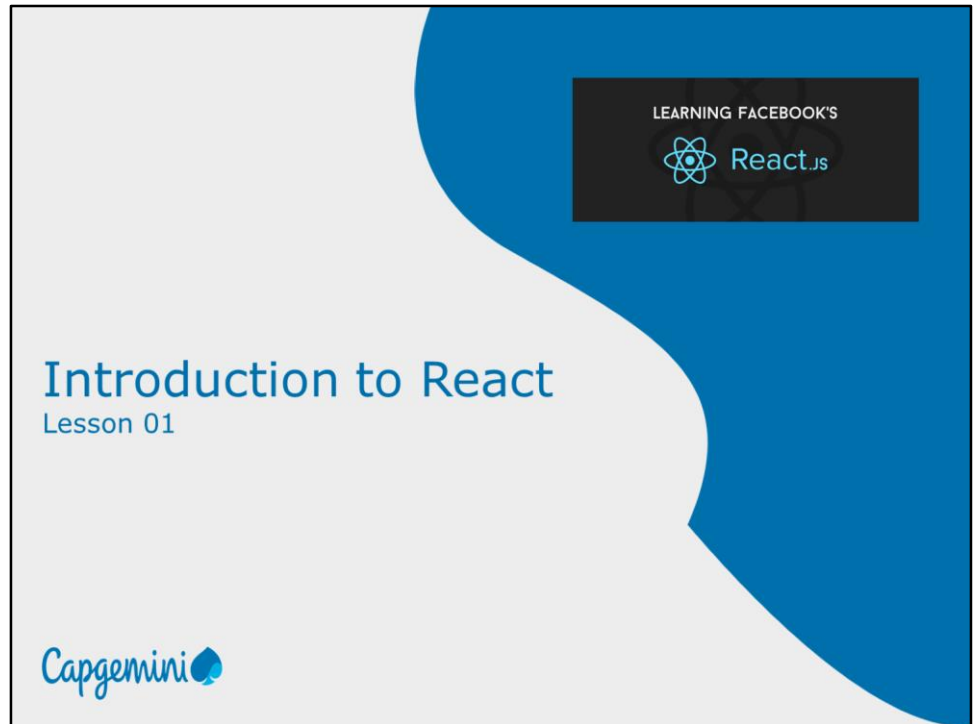


Instructor Notes:

Add instructor notes
here.



Instructor Notes:


Add instructor notes here.

Lesson Objectives

At the end of this module you will be able to:

- Overview of frameworks, libraries for client side Web applications
- React introduction,
- Understanding "what" and "why" React
- React Component Demonstration using codepen
- Environment Setup for React Application
- Understanding NPM commands
- Using VS Code
- VS Code extensions for ES6, React
- Helloworld app in React

LEARNING FACEBOOK'S



React.js

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2

Instructor Notes:

Overview of frameworks, libraries for client side Web applications

As demand increased for processing the page elements and cross browser compatibility, JavaScript frameworks evolved & eased out the process and provide a standard set of methods, functions, and controls.

Some of the popular JavaScript frameworks included Prototype, YUI, ExtJS, MooTools, and jQuery.

These frameworks allow developers to create shortcuts to working with elements in the Document Object Model (DOM).

Some of the more popular frameworks today include AngularJS, EmberJS, ReactJS, Vue Js, Flutter and BackboneJS.

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Model :

Model is where the application's data objects are stored. The model doesn't know anything about views and controllers. When a model changes, typically it will notify its observers that a change has occurred.

View

View is what's presented to the users and how users interact with the app. The view is made with HTML, CSS, JavaScript and often templates

Controller

The controller is the decision maker and the glue between the model and view. The controller updates the view when the model changes. It also adds event listeners to the view and updates the model when the user manipulates the view.

JavaScript now has a number of frameworks boasting support for MVC (or variations on it, which we refer to as the MV* family), allowing developers to easily add structure to their applications without great effort.

These frameworks include the likes of Backbone, Ember.js, and AngularJS.

Instructor Notes:

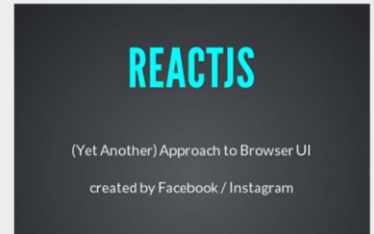
React: Introduction

It is an open source JavaScript library;
components are defined and eventually
become HTML

Developed by Facebook and Instagram

Intended to be the view("V") or the user
interface in MVC

Aims at effortless development of a large
scale Single Page Application (SPA)



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4

Instructor Notes:

Slide explains regarding the SOAP format

Understanding “What” and “Why” React



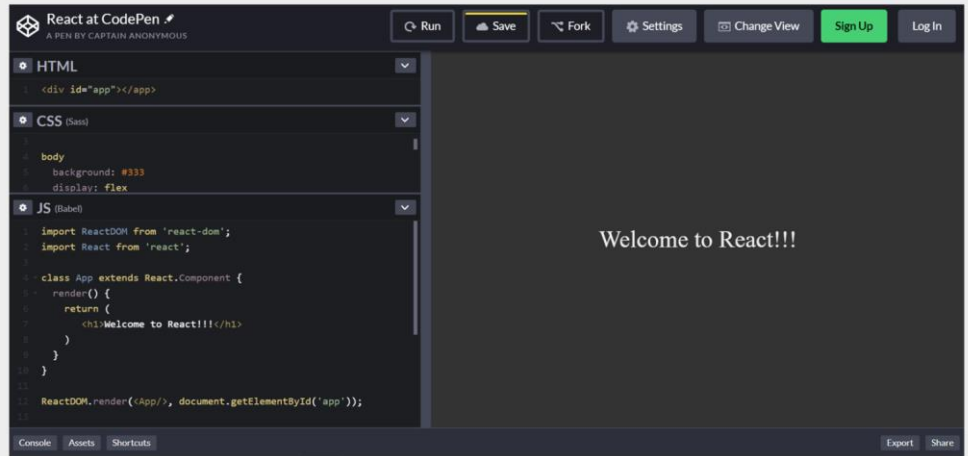
- React code is easy to understand for developers, designers, and anyone with the knowledge of XML or HTML
- It uses JSX which is clean and easy to understand syntax which can be used directly in our JavaScript
- Easy to test
- Renders quick views
- Enforces good coding practices
- Supported and used by Facebook

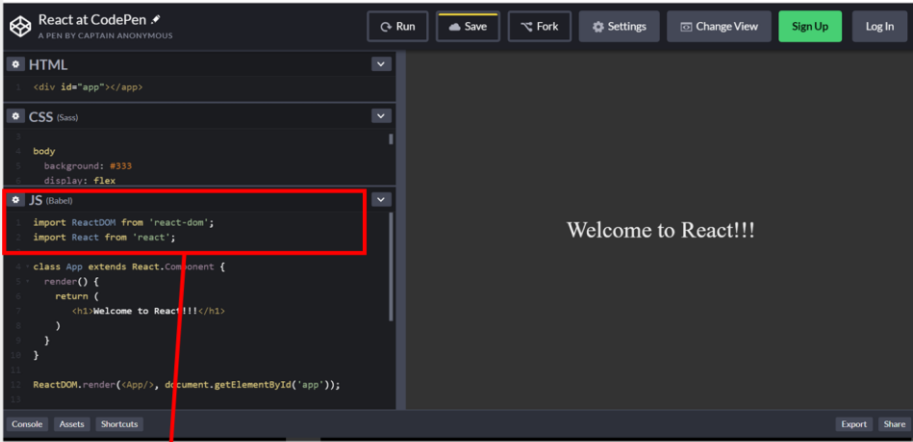
Instructor Notes:

Add instructor notes here.

React Component Demonstration using codepen

<https://codepen.io>



Instructor Notes:

React at CodePen
A PEN BY CAPTAIN ANONYMOUS

HTML

```
<div id="app"></div>
```

CSS (less)

```
body {
  background: #333;
  display: flex;
}
```

JS (Babel)

```
import ReactDOM from 'react-dom';
import React from 'react';

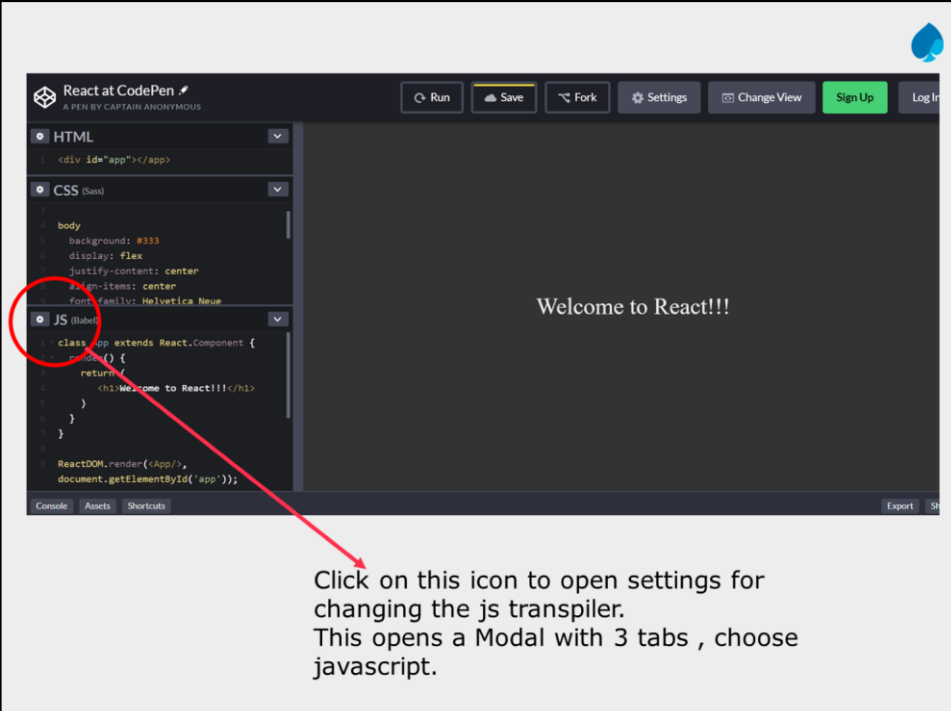
class App extends React.Component {
  render() {
    return (
      <div>Welcome to React!!!</div>
    );
  }
}

ReactDOM.render(<App />, document.getElementById('app'));
```

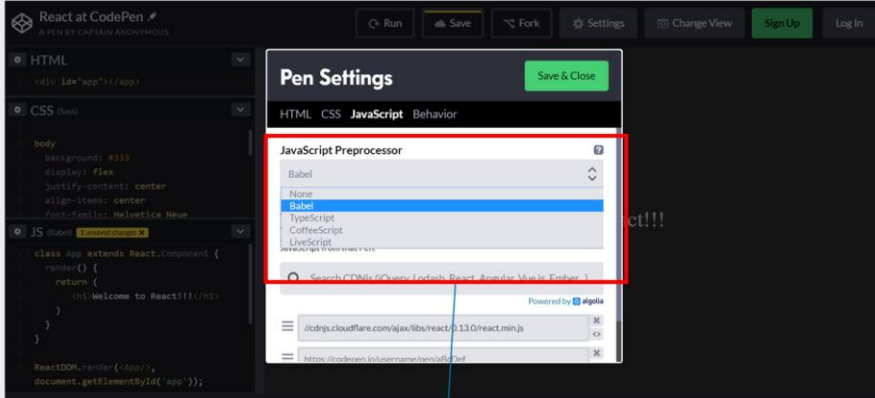
Welcome to React!!!

Console Assets Shortcuts Export Share

Use these 2 statements for import react and ReactDOM library
Into the code and use it

Instructor Notes:

Click on this icon to open settings for changing the js transpiler. This opens a Modal with 3 tabs , choose javascript.

Instructor Notes:

The screenshot shows the CodePen interface with a 'Pen Settings' dialog open. The 'JavaScript' tab is selected, and the 'JavaScript Preprocessor' dropdown menu is open, showing options: Babel, None, TypeScript, CoffeeScript, and LiveScript. 'Babel' is highlighted. A red rectangle highlights the dropdown menu, and a blue arrow points from it to the text below.

Select the transpiler you need,
Transpiler is nothing but compiles your jsx code into js code

Instructor Notes:

Understanding NPM commands



NPM is the package manager for JavaScript and the world's largest software registry

To test that you have Node.js and npm correctly installed on your machine, you can type `node --version` and `npm --version` in a terminal or command prompt.

You'll need to have Node ≥ 6 on your machine.

Frequently used commands in react will be in next slide

Instructor Notes:**Environment Setup for React Application****Getting Started – Installation Steps of React JS**

To get started with React, install the React CLI tool (Create React App) and run the command to create a new app:

```
npm install -g create-react-app  
create-react-app my-app  
  
cd my-app  
npm start
```

We use `-g` for using `create-react-app` globally

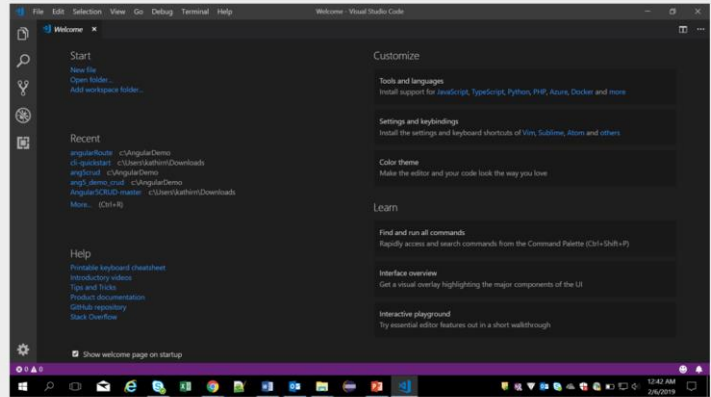
- You'll need to have Node `>= 6` on your machine.
- **Create-React-App** : creates a frontend build pipeline, so you can use it with any backend you want.
- Once created check for `Package.json` file inside application folder and move to the folder to start server

We can also create application using webpack and babel – use another support ppt

Instructor Notes:

Using VS Code

Visual Studio Code is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux.



It comes with built-in support for JavaScript, TypeScript and Node.js and has a rich ecosystem of extensions for other languages (such as C++, C#, Java, Python, PHP, Go) and runtimes (such as .NET and Unity).

Instructor Notes:

VS Code extensions for ES6, React



Below listed are the extension available for ES6 and react

1. Prettier
2. ES Lint
3. Auto Close Tag
4. Auto Import - ES6,TS,JSX,TSX
5. npm intellisense
6. Git History
7. Git Lens

Instructor Notes:

Hello-world application - Example



Create a new file index.html in the web project directory reactjs-example

Open up your Vs Code

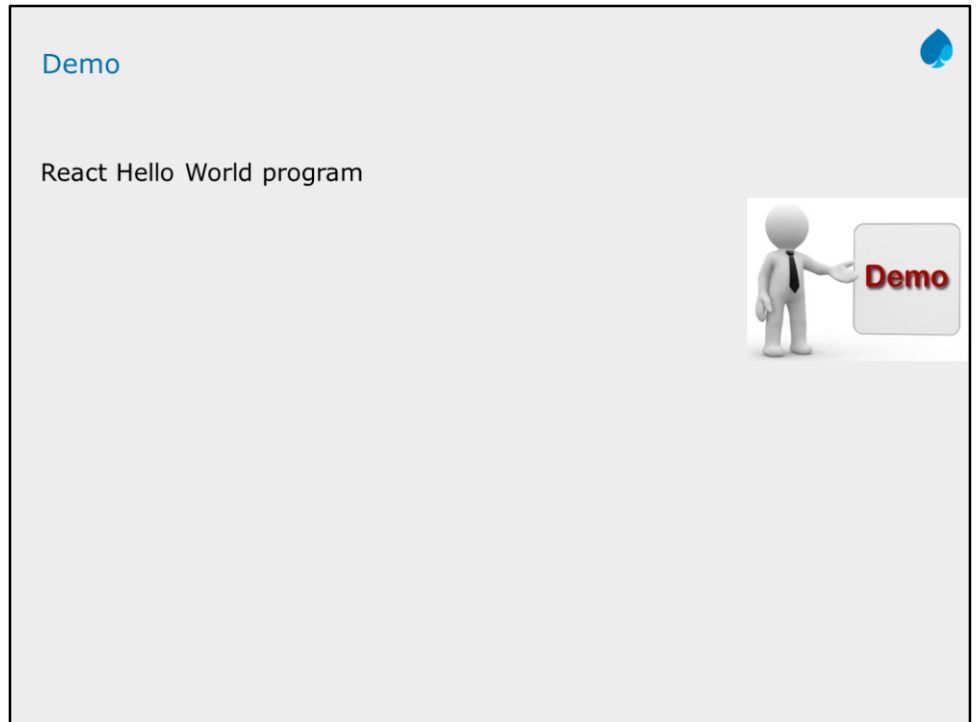
Create a new file index.html & add the code below.

```
<!DOCTYPE html>
<html>
<head>
<title>React Basic</title></head>
<body>
  <div id="root">
    </div>

  ReactDOM.render(<h1>Hello,
world!</h1>,document.getElementById('root'));
  </body>
</html>
```

Instructor Notes:

Add instructor notes here.



Add the notes here.

Instructor Notes:

Add instructor notes here.

Summary

- Overview of frameworks, libraries for client side Web applications
- React introduction,
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Add the notes here.

Instructor Notes:**Review Questions**

- Question 1:
 - How to install create react app globally?
 - A) install create-react-app
 - B) npm install create-react-app
 - C) npm install -g install create-react-app
 - D) npm global install create-react-app
- Question 2:
 - Which Command creates a frontend build pipeline, so you can use it with any backend you want.
 - A) React-App
 - B) create-react-app
 - C) create-app
 - D) React-app