

LEARNING FACEBOOK'S



Introduction to React

Lesson 01

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

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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.



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)





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



React Component Demonstration using codepen

<https://codepen.io>

React at CodePen
A PEN BY CAPTAIN ANONYMOUS

Run Save Fork Settings Change View

HTML

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

CSS (Sass)

```
html, body
  height: 100%
```

JS (Babel)

```
class Welcome extends React.Component {
  render() {
    return (
      <h1> Welcome to React Component </h1>
    )
  }
}

React.render(<Welcome/>,
  document.getElementById('app'));
```

Welcome to React Component



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



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
```

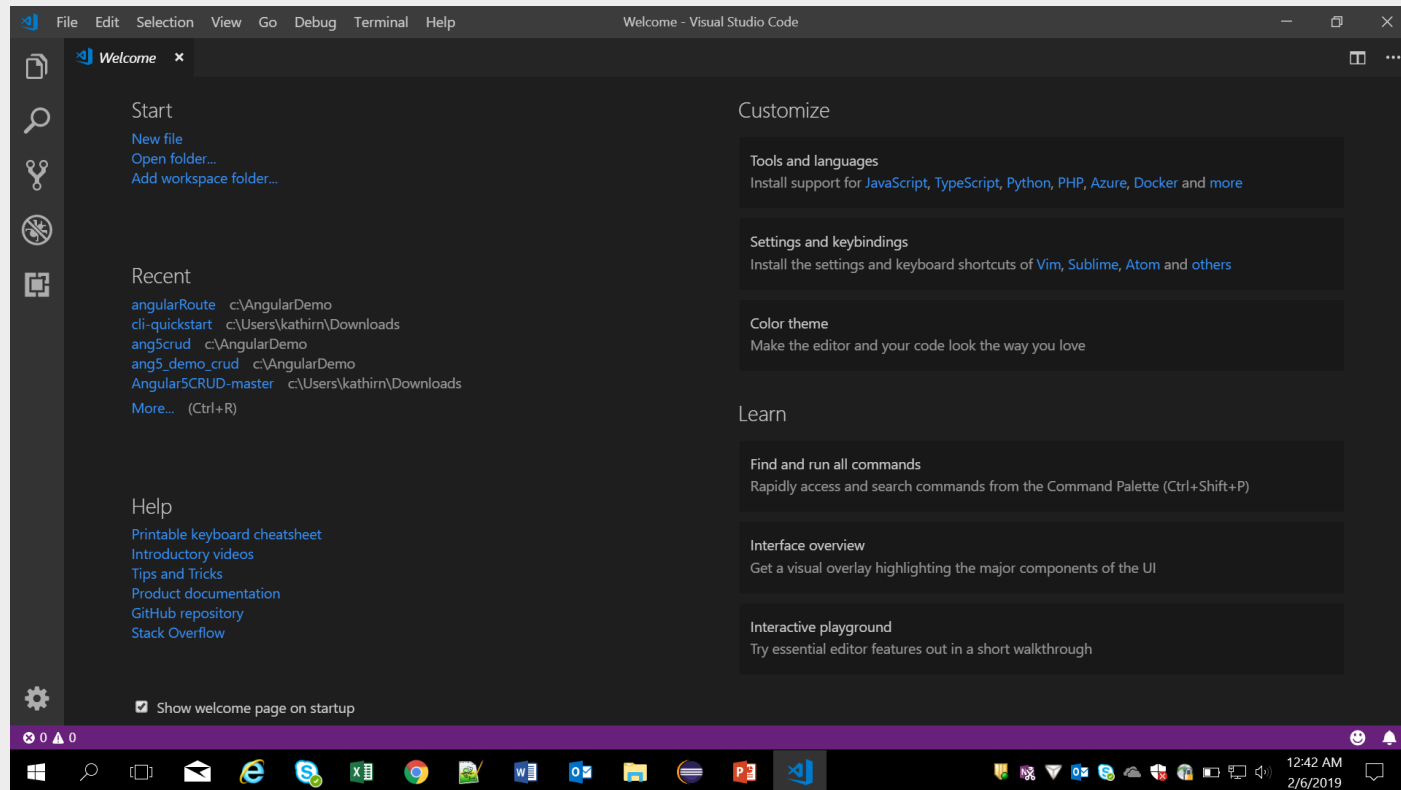
```
cd my-app  
npm start
```

- 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

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.



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



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>
```

Demo



React Hello World program



Summary



- Explain the importance of React.js
- Virtual DOM
- List advantages of React
- Identify React environment setup and React CDN hosting



Review Questions



- Question 1:
 - _____ is where you try to map URLs to destinations that aren't physical pages such as the individual views in your single-page app.
 - A) React
 - B) Route
 - C) Routing
 - D) Navigate
- 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