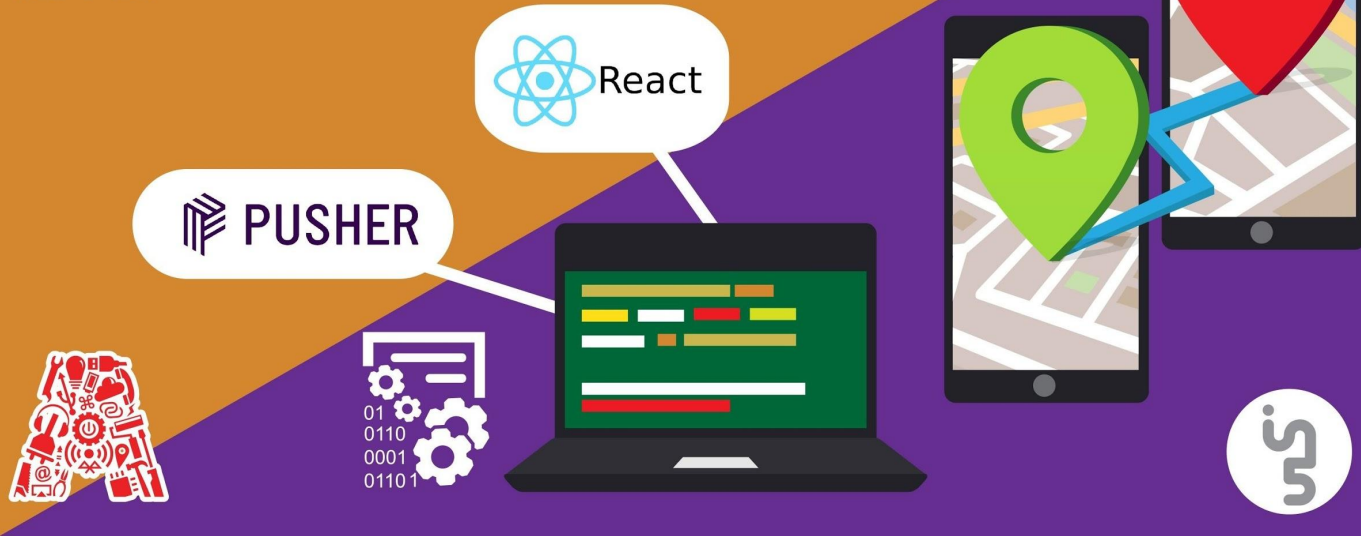




CODE A REAL-TIME LOCATION SHARING APP WITH PUSHER AND REACT NATIVE

SEPT 29



Wifi - In5-Tech [Code - WelcomeToIn5]

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About the Assembly

- A smart lab based out of In5 since Dec 2014
- Over 200 free workshops done
- ASSEMBLY: HACK - Embedded systems, IoT and hardware
- ASSEMBLY: CODE - Software projects - APIs, frameworks, apps
- Age range: 16-60 - students, professionals, entrepreneurs
- Focus on smart technology and practical applications
- Forum: members.theassembly.ae

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Overview

- Objective - Code a mobile app where you can share your location with friends and view their changing locations in real time
- We'll use **React Native** to create the app, common codebase for iOS and Android
- **Expo** will allow us to deploy quickly without Android Studio/XCode
- Real-time communication set up using the **Pusher** API



Github repository

- Github : <https://github.com/The-Assembly/LocationSharer>
- Pastebin: <https://pastebin.com/t4idcsMQ>
- Ask for help from the Assembly team if you get stuck with anything!



React Native

- A framework for building rich mobile interfaces using JavaScript
- Created by Facebook, based on its React.js libraries; follows the same design principles, but uses declarative native components
- <https://facebook.github.io/react-native/>
- Install with:
 - `npm install -g react-native-cli`

```
import React, { Component } from 'react';
import { Text, View } from 'react-native';

class WhyReactNativeIsSoGreat extends Component {
  render() {
    return (
      <View>
        <Text>
          If you like React on the web, you'll like React Native.
        </Text>
        <Text>
          You just use native components like 'View' and 'Text',
          instead of web components like 'div' and 'span'.
        </Text>
      </View>
    );
  }
}
```



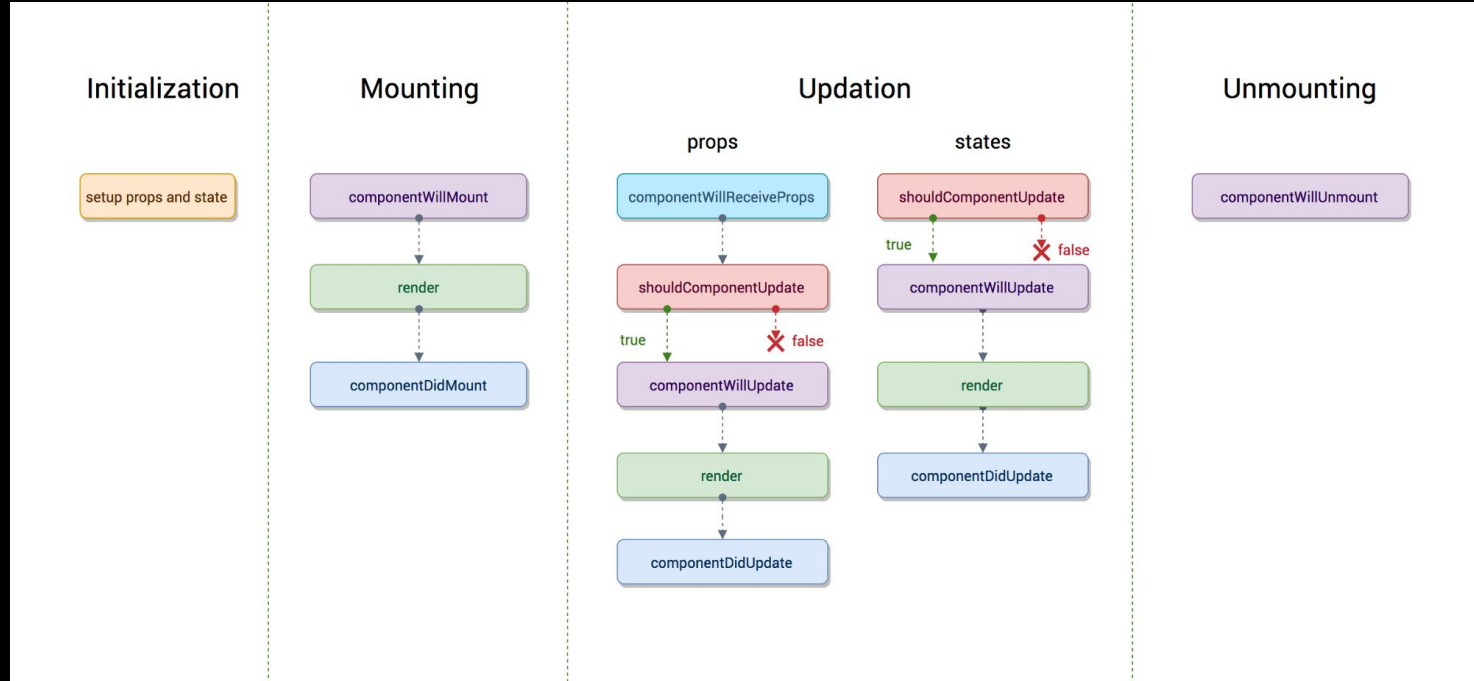
React Native

- <http://www.reactnativeexpress.com>
- Like React.js, React Native uses preprocessed Javascript according to the **ECMAScript 6.0** conventions, compiled by Babel
- JSX code written is much more compact thanks to declarative nature
- Components are written as classes with methods, properties for other components to interact with and an internal state manager



React Component Life-Cycle

COMMUNITY
INNOVATION
WORKSPACE



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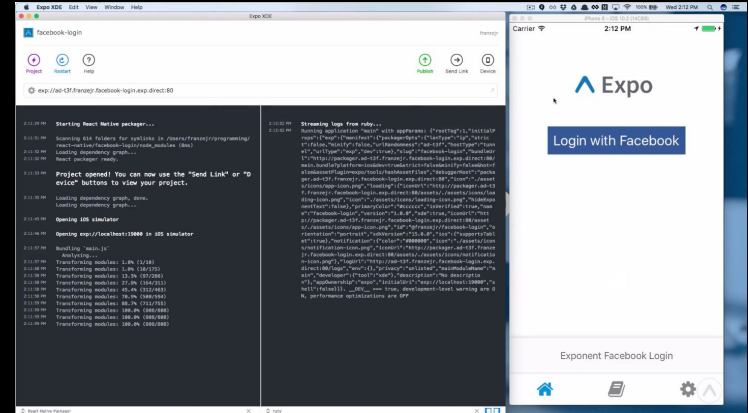
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Expo

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- A toolkit - wraps around React Native projects to remove dependency on Xcode/Android SDK
- Allows for quick testing and pre-release deployment
- Additional UI components, access to more device functionality
- Push notifications easy to deploy
- In browser using Snack
- Expo CLI or XDE
- <https://github.com/expo/xde>



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Creating a React-native app

- To create a react-native app project:
`react-native init <Project_name>`
- Make sure you have *react-native-cli* installed

OR

- Create a new project in **XDE**

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Dependencies

- npm install react
- npm install react-native@0.55 (Expo/React-Native Support)
- npm install expo
- npm install expo-cli or XDE (GUI version)



Changes to be made

- In **app.json**, add:
 - "expo": {
 - "sdkVersion": "30.0.0"
 - }
- In **app.json**, change name to:
 - "name": "main",
- Clear **.babelrc**, and add:
 - {
 - "presets": ["react-native"]
 - }



Pusher

- Hosted service API - adds real time data communication for web and mobile apps
- Real time layer between server and client
- Client events can bypass server
- Primarily WebSockets, falls back to HTTP
- Scalable, libraries support multiple frameworks
- <https://pusher.com/features>
- <https://pusher-community.github.io/real-time-laravel/introduction/pusher-use-cases.html>





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