# Course : Redux Session

**Duration : 3-days Audience :**

* Programmers looking to learn React
* Developers who want to grow out of just using jQuery
* Engineers who have researched React but have had trouble mastering some concepts

**Course Outline:**

* Overview
* ES2015 and JSX
* React - Creating Components
* React - Create Element & JSX
* React - Working with State
* React - Composing Components
* React - Events

**Pre-requisites:**

* Working knowledge of HTML, CSS
* Good knowledge of JavaScript including object-oriented JS features like object prototypes etc. ES2015 (ES6) knowledge is a plus but not necessary.
* Bootstrap knowledge is a plus, but not necessary

**Course Objective:**

React is a web front-end library used to create user interfaces, i.e. a view in MVC architecture. Originally created at Facebook, it is now a free and open-source framework maintained by Facebook, Instagram and some other individual developers and corporations. It is not a full-fledged Single Page Application (SPA) framework unlike Angular, and hence other libraries like React Router and Redux are required to build an SPA. Additionally, a module bundler like Webpack is usually used in a React application.

Redux is a state management library. It can be used with any framework or standalone but is popularly used in a React app. It manages the state of an application and helps then behave consistently across different platforms.

# Course Contents Day – 1

**Pre-requisites**

* Basics of Babel and ES2015 (ES6) for React
* The Single Page Application (SPA) architecture
* The SystemJS Universal Module Loader
* Brief introduction to Webpack

# Introduction to React

* Overview of React, Redux and React Router
* Underlying concepts – Data-binding, virtual DOM, routing etc.
* Getting started with React – including it in your application
* Scaffolding a React application using boilerplate code
* Understanding the Project Structure and build process

# Using JSX

* What is JSX?
* JSX for components
* HTML attributes
* Unescaping content

# Components

* Creating Components
* Taking inputs using props
* Maintaining component state using state
* Lifecycle methods
* Composing components

# Day - 2 Routing

* Introduction to React Router
* Route configuration
* Handling params and querystring
* Using links to setup navigation
* Handling redirects
* Hooks in routing

# Redux

* Three core Redux principles
* Redux flow overview
* Actions and Stores
* Immutability
* Reducers
* Middleware in Redux and popular Redux middleware
* Implementing custom middleware
* React-Redux introduction
* mapStateToProps and mapDispatchToProps

# Day - 3 Redux Flow

* Actions
* Reducers and root reducers
* Instantiating store and provider
* Action type constants

# Async in Redux using Redux Saga

* Async library options
* Introduction to Redux Saga
* Understanding yield
* Redux Saga Effects and Interaction between Sagas

**Production Builds**

* Setting up the production Redux store
* Webpack setup
* HTML build setup
* Dist server setup

# Facilitator Prashanth Professional Experience

Jan 2017 - present Corporate Trainer and Freelance Web Developer

Handled over 80+ batches in HTML – CSS – Jquery, NodeJS, JavaScript, AngularJS, Bootstrap, ReactJS, MongoDB to name a few. **Education**

* M.Tech., Computer Science & Engg

IIT Madras Aug 2007 – Jun 2009

* M.Sc. (Tech) Information Systems & B.E. (Hons) Civil Engg

BITS Pilani Aug 1999 – May 2004

**Clients Trained @**

* Infosys, Harman Connected, ITC Infotech, Tata Elxsi to name a few.

# Interests & Other Awards

* Recipient of the National Talent Search Examination (NTSE) scholarship

* Member, guitarist, BITS Music Club
* Microsoft certified Programmer in HTML5 with JavaScript and CSS3
* IBM certified Mobile Application Developer - Worklight V5.0.0.3