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# Course Topics

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| **Lesson** | **Topics** |  |
| REACT INTRODUCTION | * Overview of frameworks, libraries for clientside * Webapplications * React versionhistory * React 16 vs React15 * Understanding “what” and “why”React * React Component Demonstration usingcodepen * Environment Setup for React Application * Understanding NPMcommands * Using VSCode * VS Code extensions for ES6,React * Helloworld app inReact | Day 1 |
| REACT ESSENTIAL  FEATURES AND SYNTAX | * React App Project DirectoryStructure * Overview of Webpack,Babel * React ComponentBasic * Create React Component * UnderstandingJSX * Limitations ofJSX * Working with Components and Reusing * Components |
| REACT COMPONENTS, PROPS AND STATE | * Functional/Class/PureComponents * Understanding and using Props andState * Handling Events withmethods * Manipulating theState * Two waydata-binding * Functional (Stateless) VS Class(Stateful) * Components * Parent – Child Communication * Dynamically renderingcontents * Showing Lists, List andkeys |
| STYLING COMPONENTS | * CSSStyling * Scoping Styles using InlineStyles * Limitations of inlinestyes * Inline Styles withRadium * Using Psuedo classes/media quries with inlinestyles * CSS Modules, importing cssclasses * Adding Bootstrap, Semantic UI to Reactapps * Using react-bootstrap, reactstrappackages | Day 2 |
| DEBUGGING REACT APPS | * Understanding React ErrorMessages * Handling LogicalErrors, |

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|  | * Debugging React apps using googledeveloper * tools and ReactDevTool * Understanding ErrorBoundaries |  |
| REACT COMPONENT LIFE  CYCLE | * Updating life cyclehooks * PureComponents * React’s DOM UpdatingStrategy * Returning adjacentelements * Fragments | Day 3 |
| REACT COMPONENT IN  DETAILS | * Higher Order Components * Passing unknownProps * ValidatingProps * UsingReferences * React ContextAPI * Updated LifeCycle hooks(16.3) * Best practices for ReactProjects * Demoapps |
| HTTP REQUESTS/AJAX CALLS | * HTTP Requests inReact * Introduction of Axiospackage * HTTP GET Request, fetching & transformingdata * HTTP POST, DELETE,UPDATE * HandingErrors * Adding/RemovingInterceptors * Creating/Using Axiosintances |
| REACT ROUTING | * Routing andSPAs * Setting Up the RouterPackage * react-router vsreact-router-dom * Preparing the Project ForRouting * Switching Between Pages, Routing-RelatedProps * The "withRouter" HOC & RouteProps * Passing & extracting route/queryparameters * Using Switch to Load a SingleRoute * - NavigatingProgrammatically |
| REACT FORMS AND FORM VALIDATION | * Creating a Custom Dynamic InputComponent * Setting Up a JS Config for theForm * Dynamically Create Inputs based on JSConfig * Adding a DropdownComponent * Handling UserInput * Handling FormSubmission * Adding Custom FormValidation * Fixing a CommonValidation * Adding ValidationFeedback * Showing ErrorMessages * - Handling Overall FormValidity |
| DEPLOYING REACT APP TO THE WEB | |  |
| REACT REDUX | * Reduxprinciples * Install and setupredux |

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|  |  | Creating actions, reducer andstore |  |
|  |  | What is ReactRedux |  |
|  |  | Why ReactRedux |  |
|  |          | Install and setup  Presentational vs Containercomponents  Understand high ordercomponent Understanding mapStateToPropsand mapDispatchtToPropsusage | Day 4 |
| REDUX SAGA (REDUX  MIDDLEWARE) |    | Why reduxmiddleware  Available redux middlewarechoices |
|  |  | What is reduxsaga |  |
|  |  | Install and setup reduxsaga |  |
|  |  | Working with Sagahelpers |  |
|  |  | Sagas vspromises |  |
| UNIT TESTING IN REACT |  | Understand the significance of unittesting |  |
|  |  | Understand unit testing jargon andtools |  |
|  |  | Unit testing react components withJest |  |
|  |  | Unit testing react components withenzyme |  |
|  |  | Cypress tool end to end testing | Day 5 |
| WEBPACK PRIMER |        | What iswebpack  Whywebpack  Install and setup webpack  Working with webpack configurationfile |
|  |  | Working withloaders |  |
|  |  | Quick word on code splitting, lazy loading, treeshaking |  |
|  |  | Setting up Hot ModuleReplacement |  |
|  |  | Security vulnerability |  |
|  |  | Jwt token security |  |
| SERVER-SIDE RENDERING  WITH REACT |    | What is server-side rendering(SSR)? Nodejs introduction |
|  |  | WhySSR |  |
|  |  | Working with renderToString and renderToStaticMarkup methods |  |
|  |  | Deploying react app inside container like docker or webserver (tomcat) |  |