**1) UI Development**

**HTML:**

* **What is webpage?**
* **Introduction to HTML**
* **HTML template**
* **HTML fundamentals and tags**
* **HTML Paragraphs and Headings**
* **HTML Links**
* **HTML Images**
* **HTML Lists**
* **HTML Tables**
* **HTML Iframes**
* **HTML Forms**
* **Introduction to HTML5**
* **New features of HTML5**
* **HTML5 Audio**
* **HTML5 Video**
* **HTML5 Graphics-SVG and CANVAS**
* **HTML5 new tags**

**CSS:**

* **Introduction to CSS**
* **Types of CSS**
* **CSS Selectors**
* **CSS Text**
* **CSS Colors**
* **CSS Backgrounds**
* **CSS Borders**
* **CSS Margins and Paddings**
* **CSS Layouts**

**Bootstrap:**

* **Introduction to Bootstrap**
* **Different ways of adding bootstrap to webpage**
* **Basic Bootstrap classes**
* **Working with Bootstrap**

**Java Script:**

* **Introduction to Java Script**
* **Types of Java Script**
* **Java Script Statements and Comments**
* **Java Script Display/Output**
* **Variables and data types**
* **Difference between var, let and const keywords**
* **Conditional Statements**
* **Loops and Control Statements**
* **Java Script operators**
* **Java Script versions**
* **Java Script strict mode**
* **Java Script Arrays**
* **Functions**
* **Objects**
* **Prototypes**
* **Java Script Window**
* **Java Script Dates**
* **Java Script Math object**
* **Java Script popup boxes - Alert, Confirm and Prompt box**
* **Java Script DOM manipulation**
* **Java Script Events**
* **Form Validations**
* **Java Script regular expressions**
* **Java Script Errors**
* **this keyword**
* **Arrow functions**
* **Asynchronous Java Script**
* **callbacks**
* **Object Oriented Programming in Java Script**
* **Java Script classes**
* **Java Script JSON**
* **Miscellaneous concepts**

**Angular 12:**

**Type Script:**

* **What is type script?**
* **Variables , data types**
* **Class**
* **Interfaces**
* **Iterators**
* **Functions**
* **Modules**
* **Miscellaneous concepts**

**Angular 12:**

* **What is Single Page Application (SPA)?**
* **Introduction to Angular**
* **Environment setup for Angular**
* **Difference b/w AngularJS and Angular 2+**
* **Angular Architecture**
* **Angular CLI**
* **Creating First Angular App**
* **Walkthrough project structure**
* **Angular Components**
* **Data Binding-One way and Two way data binding**
* **Angular Directives**
* **Angular Services**
* **Dependency Injection in Angular**
* **Component communication using services**
* **Angular Modules**
* **Angular Pipes**
* **Angular Routing**
* **Angular Forms – Template Driven forms and Reactive forms**
* **Validations**
* **HTTP Client**
* **Error Handling**
* **Building an Angular application**
* **Angular Compilers- JIT and AOT**
* **Debugging an Angular Application**
* **Miscellaneous concepts**

**React:**

* **Introduction to React**
* **Environment setup for React**
* **Introduction to JSX**
* **Introduction to React DOM**
* **Working with JSX**
* **Creating first React application**
* **Managing application Dependencies using NPM**
* **React Elements**
* **React Components – Class based components and Function based components**
* **Component lifecycle**
* **Rendering Elements**
* **State in React**
* **Introduction to props**
* **Working with props**
* **Binding Data in React**
* **Event Handling in React**
* **Refs in React**
* **Lists and Keys in React**
* **Forms**
* **Component Styling in React**
* **Component Intercommunication**
* **Routing in React**
* **Working with REST API**
* **React DOM Server**
* **Handling requests**
* **React Hooks**
* **Context API**
* **Building a React application**
* **Debugging React application**
* **Miscellaneous concepts**

**2) NODE JS**

**Node JS:**

* **Introduction to Node**
* **Environment Setup**
* **Fundamentals of Node**
* **REPL terminal**
* **npm- Node Package Manager**
* **Project creation with npm**
* **Walkthrough project structure**
* **Managing Dependencies**
* **Introduction to Modules**
* **Built-in Modules**
* **Custom Modules**
* **Third-party Modules**
* **File System**
* **Event Emitter**
* **Event Loop**
* **Buffers**
* **Streams**
* **Node JS Callbacks**
* **Node JS process**
* **Authentication with JWT**
* **Global Objects**
* **Creating Web Server**
* **Node with REST**
* **Node http**
* **Debugging Node JS Application**

**Express JS:**

* **Introduction to Express**
* **MVC architecture**
* **Express Router**
* **Express URL Building**
* **Express HTTP**
* **Express REST API**
* **Express Cookies**
* **Express Sessions**
* **Error Handling**
* **Build Web application**
* **Authentication using tokens**
* **Miscellaneous concepts**

**3) Database**

**MongoDB:**

* **Introduction to NoSQL Database**
* **Difference Between NoSQL based DB and SQL based DB**
* **Working with JSON**
* **Mongo DB Fundamentals**
* **Working with Mongo DB**
* **Mongo DB collection**
* **Mongo DB Document**
* **Mongo DB CRUD operations**
* **Mongo DB Operations-Sort, Limit**
* **Mongo DB Indexing**
* **Mongo DB Driver**
* **Mongo DB Aggregation**
* **Introduction to Mongoose**
* **Miscellaneous concepts**

**Projects**

1. **UI Development using HTML, CSS and Bootstrap – Static website**
2. **UI Development using HTML, CSS, BOOTSTRAP and JS – Dynamic website**
3. **UI Development with Angular / React Application**
4. **NodeJS + MongoDB Backend Application**
5. **Angular + NodeJS Fullstack Application(MEAN) / React + NodeJS Fullstack Application(MERN)**
6. **GitHub Project**