**Full Stack Web Development**

* Front End Development
* Back End Development
* We will build
  + Desktop Native
  + Web Applications
  + SPA [Single Page Applications]
  + Mobile Native Applications

**Web Application Architecture**

* Software applications architecture
  + One Tier
  + Two Tier
  + 3 Tier
  + N Tier

**FAQ: What is difference between Tier and Layer?**

* Applications are built in Layers.
* Applications run in Tier.

**FAQ: What is difference between UI developer and Full Stack Developer?**

* UI Developer: Building the UI, role UI Layer.
* Full Stack Developer: Building the UI, Business Logic, Create Database

**Front End Development: Building the UI**

**Back End Development: Business Logic and Database**

**Full Stack: Front End, Back End**

FAQ: **What is MEAN, MERN, Full Stack etc?**

**M - MongoDB - Database**

**E - Express - Middleware**

**A/R - Angular/React - Client Side**

**N - Node JS - Server Side**

**Angular / React**

**HTML, CSS, Bootstrap, LESS, SASS, jQuery, JavaScript - ES6 - UI**

**M - MongoDB - Database**

**E - Express - Middleware**

**A/R - Angular/React - Client Side – UX – SPA**

**N - Node JS - Server Side**

**UI Developer**

**MEAN**

**MERN**

**Full Stack**

**Front End Development**

* It is all about building the UI [User Interface]

**What are the basic software requirements for building the UI?**

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| --- | --- |
| HTML | It is a presentation language used for presenting the contents on browser window. |
| CSS | It makes the presentation more interactive and responsive. |
| LESS & SASS | These are CSS pre-processors used to make CSS reusable, maintainable and extensible. |
| Bootstrap | It provides templates, which you can implement in your application. You build applications faster.  It is a library of HTML, CSS and JavaScript. |
| JavaScript | It is a language, used client-side, server-side, database.  Client-Side with HTML  Server-Side with Node JS  Database with MongoDB |
| jQuery | It is a JavaScript library.  Library comprises of set of functions, which you can implement in your application and handle functionality without writing much logic. |
| RxJS | It is a JavaScript Library.  It is used to handle asynchronous requests.  Asynchronous will improve the performance of application. |
| ReactJS | It is a JavaScript Library.  It is good in developing SPA. [Single Page Application].  You can build applications with good UX. |
| Ionic | It is a framework used to build cross platform mobile apps with JavaScript, HTML, ReactJS.  Other frameworks: Native Script, Cordova etc. |
| Angular [Intro] | Framework for building SPA. |
| Flash [Intro] | It is used for creating animations for web. |
| Photoshop [Intro] | It is for publishing images. |

**Back End Development**

* All about handling interactions server side.

|  |  |
| --- | --- |
| NodeJS | Server-Side Scripting  It is a technique used in web development, where scripts are employed on server, in order to generate a response customized to every client request. [CGI, JSP, PHP, ASP, Python] |
| MongoDB | Database |
| Express | It is a middleware, handle communication in multi-tier applications.  Middleware is a software framework. |
| Versioning | GIT |
| Testing | Jasmine-Karma |

**Setup Environment for Building Applications**