**Phase 3 :**

**Create scalable and dynamic web site**

Node JS

What is Node JS

Difference between client side and server side scripting language.

Creating basic example using node js

REPL tool

Node JS modules

Core modules

External module

User-defined modules

Fs module (file handling program)

url modules

http module (creating web application using http modules)

express module (external module)(creating web application using express module)

package.json file

web service

SOAP Service

**Rest Full Web Service (REST API)**

Database : no SQL (Mongo DB)

All type of query using mongo db ie basic and adv query.

Connecting mongo db database using mongo db as well as mongoose modules

Creating Web application using MVC style.

CRUD Operation front end Angular and Backed Express JS with Mongo DB database with mongoose module.

Socket IO programming

**Authentication and Authorization.**

**Html, css, JavaScript**

**Html : display the content**

**Css : it is use to display the content in proper format or presentation logic**

**Bootstrap**

**JS : programming on web application or web page or action on web page.**

**DOM**

**jQuery : it is library which provide lot of pre-defined function which help to read, write and update dom properly.**

**Ext JS**

**Coffee JS**

**React JS**

**Angular JS**

**Angular Framework**

**Vue JS**

**D3 JS**

**Backbone js**

**Etc**

**Library or Framework**

**Library is light weighted. Library doesn’t follow standard.**

**Framework is heavy. Framework follow standard rules and regulation.**

**Design pattern : best practise or solution for repeating problem.**

**The implementation of design pattern is taken care by framework.**

**Node JS : Node js is not a library or not a framework. Node js is run time environment for JavaScript program or library or framework.**

**Before Node JS JavaScript only use on client side. Ie Client side scripting language.**

**Front end side**

**Html, css, bootstrap, js and jquery or library or framework.**

**Backend end side**

**Java (JEE ) or Spring boot**

**Asp net**

**Python**

**Php**

**Cgi**

**Node JS : Node JS provided lot of pre-defined modules it may be core module or external module which help to create server side programming language.**

**Using node js (JavaScript program) we can do file handling programing, using js we can create dynamic web page, using js we can create rest api or we can do networking programming or we can connect database.**

**Etc**

**REPL Terminal : Read Eval Print loop**

In node js program we can’t use window as well as document object.

Mean node js doesn’t provide BOM and DOM hierarchy.

Node js provide one of the global object ie

console.

Node JS Modules

Node JS Modules

Module is node js is a simple or complex functionality organized in single or multiple JavaScript files which can re-used through out the application.

3 types of modules

1. Core module
2. Local module or user-defined module
3. External module

Core Modules

Fs (file system)

FS is a pre-defined core modules which provided by node js which help to do file handling synchronously as well as asynchronously.

Syntax to load the modules

let/var referenceName = require(“moduleName”);

JSON is a pre-defined object

Which contains two function which help to convert string to json as well as json to string.

In JavaScript we can create object in three style

1. Function style
2. Literal style : ES5 style
3. Class style : ES6 style

JSON.parse() : it is use to convert string to json.