

SYLLABUS

Module -1(JS basics)

- Introduction to web
- Browser Wars
- DOM tree, CSSOM tree.
- Browser internals - HTML parser , CSS parser , JS engine
- Layout engine or rendering engine JavaScript
- V8 engine internals
- IP – MAC address – Ports & Evolution of HTTP
- How the Server looks at the URL
- Request & Response cycle
- HTML Browser view - Debugger, Inspect, Responsive View
- Browser js vs Node js
- Data types
- Copy by value and Copy by reference
- Window & document object
- Array and JSON iteration
- XMLHttpRequest
- Hoisting & scope
- function & return keyword
- types of function
- MRF - array method
- error handling
- ES5 vs ES6 -
 - OOP, this, rest & spread operator
 - Array & object destructuring
 - Arrow functions
- Task:
 - Codekata problem solving

Module -2 (HTML, CSS, Bootstrap)

- **HTML**
 - What is HTML?
 - Basic tags in HTML?
 - Inline vs block element
 - div vs section vs article
 - HTML forms & Form input element with its attributes
 - HTML form submit

- **CSS**
 - What is CSS?
 - property vs value
 - Selector:- tag vs class vs id
 - Intro to pseudo-classes (link,visited,hover,active)
 - parent inherit
 - Box model - margin, padding, border
 - Flex - display, direction, wrap, flex-flow, justify-content, align-content
 - Position property - static, relative, absolute, fixed, sticky
 - overflow property - hidden, visible, scroll, auto
 - box-shadow property
 - Linear gradient
 - Clip property
 - Media query
 - Use of Font & icons
- **Bootstrap**
 - What is Bootstrap?
 - Container and grid system
- **Task:** (Mandatory to complete any two
<https://github.com/rvsp/HTML-CSS/tree/master/Tasks>)
 - Laud page
 - Banner
 - Technical documentation
 - Newspaper design
 - Survey form
- **Webkata** Completion

Module -3 (DOM)

- **DOM Manipulation**
- Document object and Window object
- Method in document object
 - createElement()
 - setAttribute()
 - innerHTML vs innerText
 - append() vs appendChild()
 - getElementById() vs querySelector() vs querySelectorAll()
- Method in Window object
 - prompt() vs alert() vs confirm()
 - setTimeout() vs setInterval()
- Events - Change CSS through JavaScript

- Cookies & session, local storage
- **Task:** (mandatory to complete any 2)
 - Pagination
 - Calculator
 - HTML Forms

Module - 4

- Callback - Event loop
- Promise
 - What are the states in the promise?
 - Promise chaining
 - Fetch API
- Async/Await
- At least 3 projects using API from (<https://github.com/public-apis/public-apis>)

Mock Interview-1

Hackathon - 1

Module -5

- Data Structure & Algorithms

Module -6

- Angular / ReactJS & Intro to Redux
- The student should do a complete Front-end application

Module -7

- MySQL & MongoDB
- NodeJS - Connecting DB with MongoDB
- Routes, Authentication - Middleware - JWT
- Custom middleware
- The student should do a complete backend application

****Five** Fullstack projects combined of Module 5 & 6

(https://docs.google.com/spreadsheets/d/14957FR7DcWfxZtx3ERxhhFD2A9jJNMiv6Cq9Mc_3WyA/edit?usp=sharing)

Hackathon - 2

Mock interview - 2

Fullstack project demonstration**Module -8**

- System Design
- AWS

Placement preparation & capstone project development (**1 to 2 weeks**)

In between add-on sessions like alumni meet, cracking interview, personality development, webinars

Final Mock interview - 3 & Capstone project review

PLACEMENT READY / HANDOVER