SYLLABUS

Module -1 (10 Days)

- 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
- Browser js vs Node js
- IP – MAC address – Ports & Evolution of HTTP
- How the Server looks at the URL
- Request & Response cycle
- HTML Browser view - Debugger, Inspect, Responsive View
- Data types
- Copy by value and Copy by reference
- Window 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
- Task:
    - Codekata problem solving

Module -2 (5 Days for 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
  - 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 (3 Days & 2 days recap)

- **DOM Manipulation**
- Document object and Window object
- Method in document object
  - createElement()
  - setAttribute()
  - innerHTMLvs innerText
  - append() vs appendChild()
  - getElementById() vs querySelector() vs querySelectorAll()
- Method in Window object
  - prompt() vs alert() vs conform()
  - setTimeout() vs setInterval()
- Events - Change CSS through JavaScript
- Cookies & session storage
- **Task**: (mandatory to complete any 2)
  - Pagination
  - calculator

○ HTML Forms

Module -4 (5 Days)

- 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 (Max 2 days)

Hackathon - 1 (Max 2 days)

Module -5 (10 Days)

- ReactJS
- The student should do a complete Front-end application

Module -6 (10 Days)

- MySQL & MongoDB
- NodeJS
- The student should do a complete backend application

**Five Full stack projects combined of Module 5 & 6

Hackathon - 2 (Max 2 days)

Mock interview - 2 (Max 2 days)

Full stack session demonstration (Min 2 to Max 4 Days)

Module -7 (5 Days)

- Data Structure & Algorithms

Module -8 (5 days)

- System Design
- AWS

Placement preparation & capstone project development

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

Final Mock interview & Capstone project review