**Level 1**

1. FreeCodeCamp – JS (133)
2. For python learners - https://futurecoder.io/
3. FreeCodeCamp – Es6 (29)
4. Simple Functions - add, subtract, sum of array, access object dynamically.
5. Program structure (Main and display Functions)
6. Datatypes
7. console.log
8. Operators
   1. Type Conversion
   2. Type of Operators
   3. Simple Datatypes
   4. Complex Datatypes
9. Tables - Array of Objects.
10. Built-in modules
    1. Math
    2. Date
11. Function composition
    1. *Random* - Integer, HexaChar, string, UUID
12. Array Functions - map, filter, reduce, sort, find, some, every
13. spread Operator - // TODO Add an example
14. Conditionals
    1. Ternary
    2. Short-circuit (Truthy-Falsey and default values) - // TODO Add an example
15. String Functions - split, join - // TODO Add an example
16. Simple Linux commands
17. Git basics – init, commit, switch
18. Simple Problems
    1. Marksheet - Tables & Array Functions
19. Debugging in VSCode
20. Some More Simple Table Problems
    1. Cart
    2. Accounts
21. Slightly complex Problems
    1. Routes Problem
    2. // TODOS Add Few more problems
22. Modules - Import/Export (refactor simple Problems from above)
23. Third Party Packages
    1. pnpm / npm – basic commands
    2. js-utils,
       * Refactor the earlier problem
    3. csv parser
       * Async/await
    4. //TODO User input module
24. Use simple problems as examples
    1. Parsing and rendering csv files.
    2. Main, read input, process input and display output functions.
    3. Importing and exporting functions
25. Recursion
    1. Factorial
    2. Nested Trees
       * Task Problem
26. REPL
27. React
    1. React Starter
    2. Basic HTML and CSS
       * Div and span
         + Basic CSS – color, background, border, font size, width, height
       * Map and render arrays
       * Table by div and span
       * HTML tables
       * <pre> and @laufire/utils/debug/pretty()
       * Task – carts, marksheet
    3. Exercise to be done:

* Marksheets data to be displayed as table using
* Div and Span tags
* Table tags
* Populations data to be displayed as a table.
  1. Components
     + Extracting internal components
     + External components
     + Passing parameters
     + Conditional styling
     + Conditional rendering
  2. Few simple problems
     + Prepare a static invoice
       - Basic – layout
       - Absolute positioning
     + Random Shapes problem (on refresh)
  3. Exercise to be done:
* Create a bus, road and its surroundings.
* Passenger image to be inserted in bus window.
* Need to introduce multiple buses.
* Move the bus using animation.
* Change the size of the bus and make it aligned properly.
  1. Services
     + Internal function
     + Imported functions
  2. Best practices
     + Read, process and display.
  3. Debugging
  4. GitHub
     + Git push, pull
     + Code Spaces
  5. Data visualization
     + Display population data as bar graph
  6. Config
  7. State management
     + seed
     + Simple Button
     + Simple Inputs
       - Text box
       - Number
     + Simple Objects
       - Dynamic shapes
     + Array of objects
  8. Students Problem
  9. Todo Application
  10. Task pane

1. CSS
   1. Introduction to CSS
   2. Box model
   3. Animations
   4. Problems
      * Windows Logo
      * Pendulum
      * Bus
      * Shapes
   5. Flexbox
2. Testing
   1. Bootstrapped testing
   2. Jest
3. Simple game

**Level 2**

1. Problem solving
   1. Diamond pattern using strings
   2. Counting items in an array.
   3. Finding common items in nested array.
   4. Arithmetic expression evaluator
2. Refactoring
   1. Naming conventions
   2. Simplifying
      * Syntax
      * Implementation
   3. Restructuring modules
      * Single responsibility principle
      * Passing context and data along
   4. DSL (Domain Specific Language)
      * Object and string references
      * Standardization
      * ECS (Entity Component System)