

	Session	Content
JS - 1	1	Orientation and
	2	Code: Hello Accio and Variables & Data Types
		Arithmetic Operator:
		- Arithmetic Operations
	3	-
	4	Conditions - 1
	5	Conditions - 2
	6	Loop day 1
	7	Loop day 2 , Scope basics (Let in terms of scope)
	8	Loop day 3
	9	Functions in JavaScript
	10	Scope in details
	11	Arrays Part 1
	12	Arrays Part 2
	13	Nested Arrays - 1
	14	Nested Arrays - 2
JS - 2	15	Introduction to Objects - 1 (Cloning)
	16	Extra Class
	1	String 1
	2	String 2
	3	String 3 , Regex
	4	Time & Space Complexity Basics
	5	Searching, Maps and Set
	6	Recursion day -1
	7	Recursion day -2
	8	Recursion day -3
	9	Sorting - 1
	10	Sorting - 2
	11	Sorting - 3 (Merge Sort and Quick Sort)

	12	JavaScript Functions Deep Dive
	13	Hof Problem Practice and Error Handling(try, catch, finally)
	14	Extra Class
F1	1	HTML Foundations
	2	HTML in Practice
	3	Github Introduction
	3	CSS Fundamentals and Box Model"
	4	CSS Flexbox
	5	CSS Grid
	6	Project - 1
	7	Amazing Designs - Practice - 1
	8	Amazing Designs - Practice - 2
	9	Amazing Designs - Practice - 3
	10	Amazing Designs - Practice - 4
	11	Amazing Designs - Practice - 5
	12	Amazing Designs - Practice - 6
	13	Landing Page - 1
	14	Landing Page - 2
F2	1	DOM Basics - Introduction to the DOM, basic selectors (e.g., getElementById, querySelector) - Attributes: innerText, innerHTML, textContent - Basic event handling (click events) (inline use and addeventListener)
	2	Extended Traversal : Extended DOM Traversal: parentElement, firstElementChild, lastElementChild, nextElementSibling, previousElementSibling

		DOM Manipulation & Efficiency : - Styling via style attributes and classList methods - Efficient DOM Manipulation: using DocumentFragment and minimizing reflows
	3	
		Dynamic Elements: - Creating and removing elements; setAttributes and getAttributes
	4	
		Data Persistence & Multi-page Apps: - Working with localStorage and JSON - In Form Talk about submit, input and change event
	5	
		Mini Project - 1 : - use Closures in app
	6	
		Mini Project - 2: - Content and individual cells extra css Preserve in localStorage, and restore it once page is refreshed
	7	
	8	Mini Project - 3
		Classes and OOPS - also this keywords in different context like methods, arrow functions, object etc
	9	
	10	Classes and OOPS Project
	11	Misslaneous
F3		Async Introduction: - Sync vs Async - setTimeout and setInterval - callbackHell - Intro to Promises 1 - Example of Cleaning by finally
	1	
		Promises: - Promises Chaining - Promises methods/apis - apis and Fetch Example
	2	
	3	Make a Proper authentication System : (Apis and Local Storage)
	4	Apis Questions Practice and async await

		<p>Event Loop:</p> <ul style="list-style-type: none"> - JS Engine Executes the Code using Call Stack - Main Job of the Call Stack - How does JavaScript perform async tasks - Web APIs in JS - setTimeout - Event Loop & Callback Queue - How Event Listeners Work in JS - need for Event Loop - fetch() function works - MicroTask Queue in JS <p>5 - Starvation of Functions in Callback Queue</p>
		<p>Advance DOM:</p> <ul style="list-style-type: none"> - Session Storage, and Cookies. <p>6 - Event Delegation and Propagation, event Persist</p>
		<p>7 Modules, NPM, NPX and Axios</p>
		<p>Youtube Clone using Modern NPM Tools :</p> <ul style="list-style-type: none"> - use Axios for api calls - use Tailwind CSS <p>9 - Bundling by Vite/Parcel</p>
		<p>Pollyfills</p> <p>10 throttling, debouncing</p>
		<p>11 Miscellaneous Class - 1</p>
		<p>12 Miscellaneous Class - 2</p>
F4	1	Basics of React - Setup, JSX, Components, Props and Keys
	2	<p>State Management (useState)</p> <ul style="list-style-type: none"> - Basics of rendering, - use state with number, objects and array
	3	<p>Use State</p> <ul style="list-style-type: none"> - functions+ lifting state up - Lazy Initialization <p>- useState & Asynchronous Updates</p>
	4	UseState and One page Ecommerce:

	5	Use Effect and its Cleanup function
		Virtual DOM & Reconciliation - Understanding DOM vs Virtual DOM - How Virtual DOM Works – Diffing Algorithm, Reconciliation, Fiber
	6	- Understand Keys More better and React Memo While doing the Project
		Routing in React: - Introduction to react-router-dom – Basic routing (Home, About, Contact pages). - Dynamic Routes & URL Parameters
	7	- use Ref
	8	Context API, Prop Drilling, use Ref
	9	Instagram Project Part 1: Authentication & Basic Dashboard
	10	Instagram Project Part 2: Post Management & Engagement
	11	Redux Basic Introduction and React Redux
	12	Redux Toolkit Part - 1
	13	Redux Toolkit Part - 2 (CreateAsyncThunk)
		Trello Clone - 1:
	14	Authentication, Dashboard, Board Creation, Viewing Boards
		Trello Clone - 2:
	15	Task Lists, Fetching Tasks, Drag & Drop
	16	Misslaneous Action - 1: 2 misslaneous class are provided as we need to discuss Assignment too whenver Required, so fit it as it suits you.
	17	Misslaneous Action - 2
B	1	SQL Database Fundamentals & Raw Queries
	2	MongoDB & NoSQL Raw Queries
	3	Mongo Queries

		<p>API Architecture & Error Handling:</p> <ul style="list-style-type: none"> - CRUD Operation (understanding Headers params, Query and Body) - Basic TO-DO - API architecture patterns - Middleware concept in Express - Error handling strategies - API response standardization - API Documentation => Use AI for creating DOCS.
	4	
		<p>Authentication Basics:</p> <ul style="list-style-type: none"> - Token and JWT Auth - Session vs Token based
	5	<ul style="list-style-type: none"> - Password hashing with bcrypt
		<p>Advanced Authentication:</p> <ul style="list-style-type: none"> - passport.js - Social authentication principles (Google and Github) - OAuth 2.0 overview - Multi-factor authentication concepts
	6	<ul style="list-style-type: none"> - Auth middleware for route protection
		<p>User Management & Authorization:</p> <ul style="list-style-type: none"> - Authorization vs. authentication - Role-based access control - Permission models
	7	<ul style="list-style-type: none"> - User profile management
		<p>Board Management:</p> <ul style="list-style-type: none"> - Resource ownership models - Collection pagination - Query filtering and sorting
	8	<ul style="list-style-type: none"> - Soft delete patterns
		<p>Board Membership & Collaboration:</p> <ul style="list-style-type: none"> - Collaboration models in applications - Many-to-many relationships - Invitation systems
	9	<ul style="list-style-type: none"> - Access control patterns

	10	Column Management: <ul style="list-style-type: none"> - List/column data structures - Ordering and positioning strategies - Drag-and-drop backend considerations - Transaction handling
	11	Card Management Basics: <ul style="list-style-type: none"> - Card entity design - Data validation strategies - Optimistic updates - Cross-entity relationship
	12	Advanced Card Features: <ul style="list-style-type: none"> - Task management features - Due date handling - Assignment patterns - Activity logging
	13	Comments & Subtasks: <ul style="list-style-type: none"> - Nested document patterns - Comment systems design - Mention functionality - Task breakdown strategies
	14	File Uploads & Attachments: File handling in Node.js Storage strategies (local vs. cloud) Image processing Security considerations
	15	Node.js Core Modules & Advanced Concepts <ul style="list-style-type: none"> - Node.js module system - Core modules deep dive(Modules that are pending) - Event emitters and listeners - Streams and buffers - Child Process
	16	Advanced Node.js & Project Completion: <ul style="list-style-type: none"> - Asynchronous patterns - Performance optimization - Monitoring and logging
	17	Misslaneous Action - 1: 2 misslaneous class are provided.
	18	Misslaneous Action - 2