Stepping Stone to Tech Life

Date : **25th March 2025**
Module : **JavaScript Assignment 01**
Duration : **45 Minutes**

Assignment Criteria

Flowchart (10 mins) – Draw a flowchart showing the steps.
Pseudo Code (10 mins) – Write step-by-step logic before coding.
JavaScript Code (15 mins) – Implement the solution in JS.
Test & Debug (5 mins) – Run, test, and fix errors.

Submission: Flowchart, Pseudo Code, and JS Code

Question 01: Personal Task Manager (To-Do List)

Scenario
Imagine you are a freelancer or student who has a busy schedule with multiple tasks to complete. You decide to create a simple task manager (To-Do List) to help you stay organized.

Your task manager should allow users to
Add a new task (Input a task and click a button to add it).
Mark a task as completed (Strike-through the text when clicked).
Remove a task (Delete completed or unnecessary tasks).

Hint: Use appendChild() and removeChild() to manage the task list dynamically.

Question 02: Student Report Card Generator (Grade Calculator)

Scenario
You are developing an automated grading system for a school. Teachers enter students' scores, and the system assigns grades based on the following scale:

90+ → A
80-89 → B
70-79 → C
60-69 → D
Below 60 → F (Fail)

The program should,
Accept a student's score (out of 100).
Convert the score into a grade.
Display whether the student passed or failed.

Hint: Use a function to determine the grade and conditional statements (if-else) to assign grades.

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Question 03: Social Media App – Fetching User Posts (API Data Fetching)

Scenario
You are working for a social media company that wants to display a list of posts. Your task is to create a webpage that:

Fetches a list of posts from an online database (API).
Displays the titles and body in a structured format.
Shows a loading message while fetching data.
Handles errors gracefully (if the API fails).

Hint: Use fetch(), async-await, and try-catch to fetch and display data from https://jsonplaceholder.typicode.com/posts

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Question 04: Online Shopping Cart System

Scenario
You are building a basic online shopping cart for an eCommerce website. Customers should be able to,

Add items to the cart (Product name & price).
View the total price of all selected items.
Remove an item if they change their mind.

Hint: Store cart items as an array of objects, use event listeners to handle actions, and update the cart dynamically in the DOM.

Question 05: Secure User Registration Form

Scenario
You're building a secure signup page for an online course platform. The registration form should include:

Name (Required)
Email (Must contain @)
Password (At least 6 characters)
Confirm Password (Must match Password)
Submit button

If a user enters incorrect details, show real-time error messages next to the fields.

Hint: Use event listeners to validate inputs and DOM manipulation to display error messages dynamically.