**General-Purpose Interactive Learning Guide Prompt (LLM Version + Example)**

**I. Configuration & Input Files**

**Lecture Topic:** L11.1: Depth First Search (DFS) and recursive procedure call (Part 1)

**Primary Source File:** Week11CTSlidesCombined.pdf

* Authority for **explanations**.

**Supplementary Source File:** Week11CTTranscriptsCombined.pdf

* Authority for **formal definitions**.

**Benchmark File:** AQ11\_1.docx

* Source for Knowledge Check questions.
* Questions must be copied **exactly as worded**.
* If this file is HTML, some questions may have figures (images provided separately).

**II. Objective**

Generate **one** self-contained HTML file that:

* Teaches **all** core concepts from the sources.
* Uses **simple, plain, conversational English** with **no unnecessary jargon**.
* Is **as simple as possible**, so even a complete beginner can read, understand, and learn from it without prior knowledge.
* Is responsive on desktop and mobile.
* Is user-friendly, polished, and educational.

**III. Content Rules**

1. **Source-Driven**
   * Only use the provided files for definitions, explanations, and examples.
   * Cover every major topic found in the sources.
2. **Precedence if Contradictions Occur**
   * For **definitions** → use Supplementary Source File.
   * For **explanations** → use Primary Source File.
3. **Terminology Consistency**
   * Any new content (e.g., interactives) must use the **exact terminology** from the sources.
   * Explanations must simplify technical terms and clearly define them the **first time they are used**.
4. **Clarity Priority**
   * Avoid long, complex sentences.
   * Break explanations into short paragraphs or bullet points.
   * Use examples, analogies, or visuals whenever they make concepts easier to understand.

**IV. Layout & Navigation**

* **Desktop:** Two columns. Sticky sidebar (left) + scrollable main content (right).
* **Mobile:** Sidebar hidden by default; show as full-screen overlay when hamburger menu clicked; auto-close after navigation.
* Smooth scroll to sections; highlight active link.

**V. Content Sections**

* Divide into logical sections for all major topics.
* Include diagrams where needed (see Visual Rules).
* Add one **interactive element** that reinforces a key concept. This may be created from your own understanding, but must match the source terminology.

**VI. Knowledge Check Requirements**

* Include all Benchmark questions exactly as written.
* Add **≥ 2× additional questions** (not rewordings) covering **all topics** from the sources.
* Formats: single-choice, multiple-correct, true/false.
* Give instant feedback (✅/❌) plus brief explanation.
* **Reset Functionality:** Provide a “Reset Knowledge Check” button that clears all answers, removes feedback, and allows the user to attempt all questions again.

**VII. Visual Rules**

1. **From Lecture/Slides**
   * Recreate essential diagrams as inline **SVG**.
   * **Do not** embed extracted images from lecture or slide files.
2. **From Benchmark File (Exception)**
   * If Benchmark is HTML and contains figures: embed provided image files in their Knowledge Check questions.
   * This is the **only exception** to the “no embedded images” rule.

**VIII. Technical Specifications**

* Output: **Single HTML file** with embedded CSS & JavaScript.
* Use Tailwind CSS (from CDN).
* HTML tags only for formatting (<strong>, <em>), no Markdown.
* Must be responsive and follow basic accessibility principles.

**Example Learning Guide HTML (L10.1)**

**Instruction:** Adapt this structure and functionality for the target Lecture Topic and Benchmark File.