1. Interactive Architecture Builder

Objective: Understand and visually assemble 1-tier, 2-tier, 3-tier, and n-tier application models.

How It Works:

- Students are provided with **drag-and-drop components**:
    - Web browser (client)
    - Web server
    - Database server
    - Additional services (e.g., authentication, cache, API)
- They receive prompts such as:
  "Build a 3-tier application that processes orders and stores customer data."
- After building the architecture, students **submit** to receive feedback on tier count and structure.

Why It Works:
This reinforces the concept that **each layer or role = a tier**, and includes the **client device as Tier 1**, helping students avoid a common exam pitfall.

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2. Delivery Model Decision Game

Objective: Learn when to use **locally installed**, **network-hosted**, or **cloud-hosted** applications.

How It Works:

- Students are shown **realistic workplace scenarios**:
    - *"A sales team needs an app they can use offline in the field."*
    - *"An HR system needs to be accessible from any office globally and maintained by the vendor."*
- They choose one of the three delivery methods.
- Each answer gives **feedback explaining the trade-offs** (network/internet requirements, flexibility, maintenance burden).

Why It Works:
Teaches decision-making by helping learners compare the **needs of the end user** against the **benefits and limitations** of each delivery method.

3. Architecture Quiz Carousel

Objective: Reinforce key terminology and exam prep through fast-paced practice.

How It Works:

- Students progress through a **carousel of timed multiple-choice questions**, drag-to-match exercises, and hotspot questions.
- Examples include:
  - Identify the tier of an architecture based on a diagram.
  - Match application delivery models to their characteristics (e.g., "Requires Internet access").
  - Choose the correct architecture based on a project scenario.

Why It Works:
Combines **active recall** with **immediate feedback**, reinforcing memory and preparing for exam-style questions.

Summary Table

Activity Name	Learning Goal	Interaction Type
Interactive Architecture Builder	Build understanding of tiered architectures	Drag-and-drop construction
Delivery Model Decision Game	Evaluate and choose appropriate delivery methods	Scenario-based decision making
Architecture Quiz Carousel	Practice identifying tiers and delivery traits	Mixed-format quiz