KEY IN-CLASS STUDENT ACTIVITY 1.2: MANAGE THE STATE OF AN APPLICATION

Lesson Objective 1.2:

Manage the state of an application. *Topics included*: understand states of an application.

Resources, software, and additional files needed for this lesson:

1. Internet access

Guiding questions:

1. **What are the states of an HTML5 application?** Developers must understand the session state, application state, and persist state. HTTP is a stateless protocol and therefore does not keep any data. If a user partially completes a form, the information is lost when he or she logs off. Therefore, the developer must decide what information needs to be saved for each state.
2. **List two ways to store data using HTML5.** HTML5 has two storage methods: sessionStorage and localStorage. The sessionStorage method is available for the lifetime of the current session only. The localStorage method is similar to a cookie, but it holds more data, access is restricted to just the client (JavaScript), and it distinguishes between windows as well as browser and domain.
3. **What is a cache, and how is it used in HTML5?** HTML5 defines a special application cache called AppCache to store frequently used resources such as images, CSS, JS, and HTML pages. Caching allows user access to pages and images even when users are offline.

Student Activity:

Directions to the Student:

Read the following scenario and answer the questions. Verify your answers with the instructor.

Scenario:

Cassie is a high school computer science teacher. She is teaching web design for the first time this year, and she needs to brush up on her HTML skills, especially the recent introduction of HTML5.

Most web developers are familiar with the concept of cookies, which are used to save information, such as user-names and passwords, previously visited pages, and more, on a client PC for future use. Because of limitations and security issues with cookies, HTML5 has introduced an alternative way to store user information. Answer the questions below to help Cassie prepare for her new class.

Content:

1. Name the feature in HTML5 that allows data to persist from one session to the next. Describe the type of data commonly saved using this feature.

   In HTML5, the developer can use localStorage to keep user preferences or partially entered form data persistently from one session to the next.

2. What problems exist when using localStorage? Recommend a solution for each problem identified.

   The localStorage method is limited in size, so the user must determine how to manage the items and purge any data that is no longer needed. For example, if each item has a timestamp, the user could delete items greater than 20 days old.

3. Describe the difference among session state, application state, and persist state.

   Session state refers to the information associated with the current session from the time the user logs on until he or she logs off.

   Application state starts when the first request is made to launch the application on the server and is released when the application closes.

   Persist state refers to any data that is saved and available even when the user ends the session and returns at a later time.