

ITS 362 – Distributed Application Development

Lab 04 – Object-Oriented JavaScript

Objectives:

1. To learn to use OOP in JavaScript
2. To learn to use JSON and cookies with JavaScript
3. To learn how to program and debug in JavaScript
4. To apply a variety of Web technologies (HTML, CSS and JavaScript) in an application

Tasks:

Rewrite the grade calculator HTML page such that it uses objects, and persists the object state (data) using cookies – please use the HTML you created in Lab 02. You may implement a Save button to store the assignment data in the cookie. Make sure you have a way to demonstrate that the data is actually saved to the cookie. How? Can you populate the data on the HTML page from what's stored in the cookie?

Each assessment (a lab, quiz, exam, participation, and so forth) can be modeled as an Assessment (JavaScript) object whose class diagram is shown on the right. You should use array(s) to group the assessments into a single object (of CourseGrade) which should include grade calculations. A single top-level object can facilitate storing data into the cookie.

Assessment
-name
-maxpoint
-earnedpoint

One tip: if an Assessment's name is the same as the id of the corresponding textbox, your (coding) life can be easier.

Given that the cookie does not accept native JavaScript object, you should convert the JavaScript object to a JSON string before saving it to the cookie. The same is true before you populate the data to the HTML page from the cookie data. This time, you need to convert the cookie data (JSON) string back to a JavaScript object.

You should not use any JavaScript frameworks/libraries in this lab assignment.

You should have a separate css file for any styles you need for this app, and a separate js file for JavaScript.

Please follow the good coding styles, use modules, and adopt meaningful names and good naming convention. Also, avoid and minimize hardcoding in your app.

Deliverables

Submit all your code files (html, css, and js) and screen shots of running application to Blackboard. Please do not cut and paste all code from all files into one document. Either submit individual files in Blackboard or as a zip file.

Note:

Due to the limited resources, we can only check your app on Windows, and with Internet Explorer or FireFox. Please indicate which Web browser and its version you use.