

Lab 6 Instructions, Selection, Group A

CS 133JS, Beginning Programming: JavaScript

Overview

The objective of this lab is to give you practice using:

- Creating objects
- Working with object properties
- Working with object methods
- Using object constructors
- Working with complex objects

Part 1: Object Exercises

A web page, *ObjectExercises.html*, has been written for you that contains code to call functions and use code that you will write in a file named *ObjectExercises.js*. The instructions for writing your functions and the code to test your functions are in *ObjectExercises.html*, but all the code you write will go in *ObjectExercises.js*.

Part 2: Web Apps

You will create two web apps. The HTML page for each of these has already been written for you. You will just write the JavaScript file.

Web App I for Group A – Grade Book

This web app displays a list of students and allows an instructor to add names to the list and enter grades.

This is a new version of the Grade Book you made previously using arrays. This one will use objects.

Implementation:

1. Declare a one-dimensional global array named *students*. This will hold *Student* objects.
2. Define an object constructor named *Student* with the following properties:
 - a. name
 - b. grade
3. Write three functions:
 - a. *addStudent*
 - Has one parameter: a student's name.
 - Adds a *student* object to the *students* array with the student's name and a default grade of "U".
 - b. *removeStudent*, this function:
 - Has one parameter: the array index for the student.
 - Returns true if the index is valid.

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- Hint: Use the *splice* method to remove the *student* object from the array.

c. *changeGrade*

- Has two parameters: student's name, grade.
- Returns true if the student's name was found.
- Hint: Use a loop to find the student object with the correct name, then change the value of the grade property.

This is a screenshot of a working Grade Book web app:

Grade Book

Student			Grade		
1	Lucy Pevensie	Delete	A	A	Enter
2	Jill Pole	Delete	B+	B+	Enter
3	Eustace Scrubb	Delete	B	B	Enter
4	Edmond Pevensie	Delete	A-	A-	Enter
5	Polly Plumber	Delete	U		Enter
<input type="text" value="Polly Plumber"/> <input type="button" value="Add Student"/>					

Submitting your lab work on Moodle

Beta Version

Post the following in the *Lab Beta forum*:

1. The web pages you created for part 2.
(Zip the files for you web pages and attach them to the post.)
2. A code review of your lab partner's web page for part 2.
(Review the part 2 web apps for one of your lab partners using the Code Review Form provided.)

Code Review

1. Submit a copy of the code review above to the *Lab Code Review assignment*.

Production Version

You may revise your beta version before submitting the production version. On the code

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review form you received from your lab partner, complete the “Production” column to show what you did or did not revise.

Upload the following to the *Lab Production Version* assignment:

1. A zip file containing the two files (.html and .js) for part 1.
2. A zip file containing the four files for part 2.
3. The code review from your lab partner with the “Prod” column filled in by you.