

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

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Web App II for Group A – Coming Soon

I'm still working on the instructions for this one. I'll have them ready later today.

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 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.