Lab 17 – Arrays of Objects

Objectives

- Writing Javascript constructors and functions that work with arrays of objects

What to do in Lab?

1. Log in to the computer. If you are reading this, you must have done this already.
2. Create CPSC1045\Lab17 folder
3. Download the file Lab17.zip from D2L to your system. Unzip the contents into your Lab17 folder.
4. Open the included HTML document named **lab17.html** in Google Chrome by either double clicking (if Chrome is the default browser) or by right clicking on it in your file explorer and then selecting Open With -> Google Chrome. The document looks as follows:

Lab 17: Zoo - An Array of Objects

Name: [   ]

Species: [   ]

Age: [   ]

[Add to Zoo]

Output goes into this Unordered List

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5. Now open the **lab17.js** file using your favorite HTML editor such as Brackets or VS Code, so that you can write the code. You need to work with only this file.

The Task (10 marks)

6. Write the JavaScript to complete the following steps:
   a) Create an object constructor that creates animal objects. An animal object should store the following properties:
      - Name – the name of the animal
      - Species – the species of the animal

- Age – the age of the animal
b) Create a global array that will store an unknown number of animal objects.
c) Create an **addAnimal()** function that runs when the Add to Zoo button is clicked. This function should do the following things:
  - Get the name, species, and age of the animal from the user input fields
  - Create an animal object as per the user information using the constructor
  - Push the animal object onto the array
  - Update the output/display
d) Create a function **display()** that will display all of the animals stored in the array as an unordered list on the page. Call this function whenever a new animal is added to the array. The sample output after each of several steps is shown below:

Lab 17: Zoo - An Array of Objects

Name: Appa

Species: Sky Bison

Age: 106

Add to Zoo

- Appa, Sky Bison, 106

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Lab 17: Zoo - An Array of Objects

Name: Momo

Species: Flying Lemur

Age: 100

Add to Zoo

- Appa, Sky Bison, 106
- Momo, Flying Lemur, 100

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Lab 17: Zoo - An Array of Objects

Name: Naga

Species: Polar Bear Dog

Age: 2

Add to Zoo

- Appa, Sky Bison, 106
- Momo, Flying Lemur, 100
- Naga, Polar Bear Dog, 2

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Submission: What to hand in

Zip the folder Lab17 which contains your source code (the edited file **lab17.html** and the **lab17.js** file you created) and upload it to D2L.

Submission: When to hand in

At the end of the lab period.