General Assembly

STUDY GUIDE

ARRAYS AND OBJECTS

Overview

Arrays and objects are data structures, or ways to organize information

Arrays

Arrays allow you to store multiple similar items as one variable

Format Basics

- Arrays are written as a list of values contained within brackets and separated by commas
- Arrays can grow and shrink in size
- Each value in an array is called an element
- Elements are assigned numbers based on their position in the list, starting with 0. This number is called an **index.**

  - Indices allow you to access and update array values

Length refers to the number of values in an array

- Write .length after an array's name to return the number of elements in an array

To *access* a value in an array, use **bracket notation** and refer to the element by its index value

- For example, **arrayName[0]** will call up the element at the 0 position in the array called arrayName

To *change* a value in an array, use bracket notation and proceed as if you were assigning a value to a variable

- For example - **favoriteFoods[1] = "veggie burgers";** will change the second element in the favoriteFoods array to veggie burgers

Array Modifications

- You can modify an array by sorting, removing, or adding data
- Two basic ways to change an array:
  - **Push** - adds new items to the end of an array
  - **Pop** - removes items from the end of an array

Objects

Objects are a way of grouping together properties that contain multiple types of data

Format Basics

- Objects start with the object name
- Properties are added below, surrounded by curly brackets
- Properties are written as **key-value pairs** of data
  - Keys are separated from values by a colon
  - Key-value pairs are separated from each other by commas

To access a value in an object, use **dot notation** and refer to a value by its property name

- For example - **objectName.propertyName**

To create new properties in an object, use dot notation, followed by the value you're adding

- For example - **objectName.propertyName = "new value"**