

Midterm #3 Review Questions

These questions will help you prepare for the midterm. Solutions will not be provided, however, you are welcome to discuss your solutions with TAs and your instructor during office hours. **Do not use a computer when writing JavaScript programs; write your solution on paper then verify your solutions with the computer.** That is the best way for you to prepare for the exam.

Exercises

1. Worksheet #3 <http://www.cs.umd.edu/class/spring2008/cmsc198N/worksheets/Worksheet3.pdf>
2. Write a function named "initialize" that has the following prototype:

```
function initialize(initialValue, maxRows, maxCols);
```

The function creates a two-dimensional array of integers with a number of rows and columns that corresponds to **maxRows**, and **maxCols**, respectively. In addition, the function initializes each array entry with the value **initialValue**.

3. Write a function named "isRagged" that determines whether a two-dimensional array is a ragged array. Remember, a ragged array is one where all the rows do not have the same length.
4. Write a function named "equals" that has the following prototype:

```
function equals(array1, array2);
```

The function will return true if the two-dimensional arrays (**array1** and **array2**) have the same corresponding elements. For example:

10, 20, 30	equals to	10, 20, 30
50, 40		50, 40

10, 30, 20	not equals to	10, 20, 30
50, 40, 60		40, 50, 60

10, 20, 30	not equals to	10, 20, 30
40, 50		40, 50, 60
60		

5. Write a function named "printByColumns" that prints the contents of a two-dimensional array column by column (i.e., data of column 0 will be printed, followed by data of column 1, etc.)
6. Write a function named "sum" that has the following prototype:

```
function sum(array1);
```

The function takes a two-dimensional array of integers (**array1**) as parameter and returns a one-dimensional array where each entry of the one-dimensional array corresponds to the sum of the values of each row of **array1**. For example if array1 is:

```
10, 20, 30
50, 40
60, 9
```

sum will return

```
60, 90, 69
```