

Announcements

- **Term paper due today (please put it on the table)**
 - Turn in on Friday with 20 point penalty
- **Project #4 due tomorrow (Thursday)**
- **Exam #2 on Monday**

Quiz #4 Solutions

More about Arrays

We know how to create an array:

```
var a = [0, 4, 9, 1, 6];
```



A way to create an empty array:

```
var a = new Array(5);
```



2-Dimensional Arrays

Regular array:

0	4	9	1	6
---	---	---	---	---

Can we create structures like these?

0	4	9	1	6
7	3	3	9	5
2	4	8	1	2

7	3	1	2	
6	8			
0	4	9	1	6

2-Dimensional Arrays

7	3	1	2	
6	8			
0	4	9	1	6

JavaScript does not have “built-in” 2D arrays

You *can* create an array of arrays:

```
var a = [ [7, 3, 1, 2], [6, 8], [0, 4, 9, 1, 6] ];
```

How do we access each element?

`a[0][2] = ?`

`a[2][4] = ?`

2-Dimensional Arrays

7	3	1	2	
6	8			
0	4	9	1	6

What is the value of this expression: `a.length`

What expression gives us the length of a particular row?

How can we process all elements in the structure?

```
for (var r = 0; r < a.length; r = r + 1) {  
    for (var c = 0; c < a[r].length; c = c + 1) {  
        ... a[r][c]...  
    }  
}
```

Examples: [TwoDimensionalArrays1.html](#), [MegaTurkey.html](#)

2-Dimensional Arrays

7	3	1	2	
6	8			
0	4	9	1	6

Can be manipulated just like regular arrays

- push
- pop
- shift
- unshift

Example: [TwoDimensionalArrays2.html](#)