

# JAVASCRIPT: ARRAYS

# ANATOMY OF AN ARRAY

➤ CREATE ARRAYS LIKE SO: `VAR ARRAY = []`:

```
var fruit = ["apple", "orange", "grapefruit"];
```

➤ ACCESS ELEMENTS WITH '`ARRAY[INDEX]`'. NOTE THAT ARRAYS ARE '0-INDEXED'

```
fruit[0]; // "apple"  
fruit[1]; // "orange"
```

➤ GET LENGTH OF ARRAYS WITH `ARRAY.LENGTH`

```
fruit.length // 3
```

# EXERCISE

> WHAT DOES THE FOLLOWING PRINT OUT?

```
var glaive = ["jack", "sprat", "lean"];
```

```
var wurm = [1, 2, 3];
```

```
console.log(glaive[0]);
```

```
console.log(wurm[1]);
```

```
console.log(glaive.length);
```

```
console.log(wurm.length - wurm[1]);
```

# LOOPING THROUGH ARRAYS

> WHAT DOES THE FOLLOWING PRINT OUT?

```
var buildings = ['office', 'institution', 'prefab', 'duplex'];  
  
for(var i = 0; i < buildings.length; i++) {  
    console.log("i work at the " + buildings[i]);  
}
```

# LOOPING THROUGH ARRAYS (CONTINUED)

> WHAT DOES THE FOLLOWING PRINT OUT?

```
var friends = ['seagull', 'bagerl', 'beagle'];
```

```
for(var i = 0; i < friends.length; i++) {  
    var pluralized = friends[i] + 's';  
    friends[i] = pluralized;  
}
```

```
console.log(friends);
```

# LOOPING IN REVERSE

> WHAT DOES THE FOLLOWING PRINT OUT?

```
var planets = ['mars', 'venus', 'saturn', 'jupiter'];
```

```
var string = '';
```

```
for(var i = planets.length - 1; i >= 0; i--) {  
    string += planets[i] + ', '  
}
```

```
console.log(string);
```

# EXERCISE

➤ WHAT DOES THE FOLLOWING PRINT OUT?

```
var boop = [5, 3, 1, 2];  
var beep = 0;  
for(var i = 0; i < boop.length; i++) {  
    beep += boop[i];  
}  
  
console.log(beep);
```

# EXERCISE

➤ WHAT DOES THE FOLLOWING PRINT OUT?

```
var boop = [4, 5, 3, 10, 2];  
var beep = 0;  
for(var i = 0; i < boop.length; i++) {  
    if(beep < boop[i]) {  
        beep = boop[i];  
    }  
}  
  
console.log(beep);
```



# EXERCISE

- > GIVEN AN ARRAY OF STRINGS, FIND THE LONGEST STRING AND PRINT OUT THAT STRING.
  - > HINT: STRINGS ALSO HAVE THE .LENGTH PROPERTY
    - > I.E "starburst".length IS 9

# NESTED ARRAYS

```
var container = [ [1, 2, 3], ["ring", "rang", "rung"], [1, 7, 8] ];

for(var i = 0; i < container.length; i++) {
    for(var j = 0; j < container[i].length; j++) {
        console.log(container[i][j]);
    }
}
```

# EXAMPLE

```
var topographyGrid = [ [1, 0, 0, 0, 0, 0],  
                        [1, 1, 0, 1, 0, 0],  
                        [1, 1, 3, 3, 1, 0],  
                        [1, 1, 2, 2, 2, 0],  
                        [1, 1, 1, 1, 1, 0],  
                        [0, 0, 1, 1, 1, 1] ];
```