



DEPOT/U

JavaScript

Agenda

9am	Questions
9:30am	Lecture
11am	Lab
12:30pm	Lunch
1-5pm	Lab – cont'd



By Reference vs. By Value

- Refers to how parameters are passed into functions
- By Reference refers to the value of a specific point in memory
- By Value creates a new copy of the value in a different memory location
- JavaScript claims to be By Value, but it's more accurate to say Call by Sharing
- Primitive types are passed by value
- Objects are shared



Scope

- Contains current context of executed code
- Can be Global or Local
- Functions can access the variables of the parent function

```
var greeter = function(name) {}  
{  
  var greeting = `Hello ` + name;  
  return function() {  
    console.log(greeting);  
  }  
}
```



Anonymous Functions

- Functions that have no name reference
- Typically passed in as arguments to other functions

```
var arr = [1,2,3,4,5,5,6,6,7,7,8,8,8,6,4,4,3,3,2];  
arr.sort(function(a,b) {  
    //reverse sort  
});
```



Closures

- Closures refer to the ability for functions to remember the environment in which it was created

```
var bgColorSetter = function(color) {  
    return function(selector) {  
        var e = document.querySelector(selector);  
        e.style.backgroundColor = color;  
    }  
};  
var blue = bgColorSetter('lightblue');  
var red = bgColorSetter('red');  
blue('.div');  
red('#mydiv');
```



Loop Scope

- Variables in the loop can change from other loop iterations

```
var arr = [];  
for(var i = 0; i < 3; i++) {  
    arr.push(function() {  
        console.log(i);  
    });  
}
```

- Each function in the above case will output 2!
 - This is likely not the expected behavior since all the functions are the same.



Loop Scope – cont'd

- To fix the problem, we need a closure

```
var arr = [];  
var createFunction = function(v) {  
    return function() {  
        console.log(v);  
    }  
}  
for(var i = 0; i < 3; i++) {  
    arr.push(createFunction(i));  
}
```



Week 2 Lab 2

Recreate existing JavaScript functions

