ITMD 465/565
Rich Internet Applications

Lecture 4

Fall 2019 – September 11, 2019

Tonight's Agenda

- TA Information

- DOM Manipulation and Event Demo continued

- Namespace

- OOP Patterns

- Object Member Visibility

TA Info

- A TA has not been assigned, might know by next week.

DOM Manipulation continued

- See slides from last week

Namespace

Namespace Problem

- Variable names need to be unique

- All variables by default are placed in the global "window" namespace when defined normally with the var keyword unless defined inside a function. Functional Scope, changes some with ES6+

- Variables defined inside a function are scoped or name spaced to that function.

- If we mix our code with others code we may overlap variable names

- We want to define our own namespace

- We have a few ways we can do that.

Self executing protecting function or Immediately-invoked Function Expressions (IIFE)

```javascript
(function(){

//anything in here has its own special namespace
//functions and variables are not available to the outside


})();
```

The Big Plain Map/Object Literal

```
var myNamespace = {};

myNamespace.aFunction = function(){

};

myNamespace.aVariable = 7;
```

- Use everything from the Map/Object

- Useful for quick solution but doesn't have private variables or methods at all

Exporting a Map to the global Namespace

```
(function(){

        var myNamespace = {};

        //Private variables
        var name = "brian";

        //Public members/variables
        myNamespace.myName = "brian";

        //Public Method
        myNamespace.myFunction = function(){ alert(this.myName)};

        window.myNamespace = myNamespace;

})();
```

Exporting a Map to the global Namespace with possible namespace in window already

```javascript
(function(ns){

        //Private variables
        var name = "brian";

        //Public members/variables
        ns.myName = "brian";

        //Public Method
        ns.myFunction = function(){ alert(this.myName)};

        window.myNamespace = ns;

})(window.myNamespace || {});
```

Return a Map to the specified Namespace

```
var namespace = function(){

        var myNamespace = {};

        //Private variables
        var name = "brian";

        //Public members/variables
        myNamespace.myName = "brian";

        //Public Method
        myNamespace.myFunction = function(){ alert(this.myName)};

        return myNamespace;

}();
```

Namespace as a function parameter

```
var namespace = {};

(function(ns){

        //set up private data here

        //public  data

        ns.aFunc = function(){ … };
        ns.aVar = 123;

})(namespace);
```

Assignments

Reading/Assignments

- Read Eloquent JavaScript Chapters 5, 17, 18

- Read blog post on JSON
  https://itnext.io/understanding-json-in-javascript-5098876d0915

- Lab 2 will be posted tonight in blackboard – Due Saturday February 21, 11:59pm Chicago. **No extensions or extensions.**