Name:______________Qixiang Liu________________________________

Eloquent JavaScript

EECS 368 sp’18 Chapters 3 & 4 (Functions & Data)

Due: Friday 16th Feb, 10am (start of class)

Instructions: Read Chapter 3, and Chapter 4 of Eloquent JavaScript THIRD EDITION (**http://eloquentjavascript.net/3rd_edition/**) and complete the exercises listed below and submit your answers on **Blackboard.**

1. By signing (or e-signing) below, you attest that you have read all sections of this reading assignment.
   Qixiang Liu

2. List *at least* **3** quotes from the reading that you thought were particularly meaningful. For example, one of mine is: “There are those who will say *terrible* things about the JavaScript language. Many of these things are true.” --(Introduction, Eloquent JS)

   1) The dilemma of speed versus elegance is an interesting one.
   2) Correlation is a measure of dependence between statistical variables.
   3) Numbers, Booleans, and strings are the atoms that data structures are built from.

3.

   a. At the end of Chapter 3, do either the **Recursion** exercise or the **Bean Counting** exercise.

   b. At the end of Chapter 4 do one of: **Reversing an Array**, **A List**, or **Deep Comparison** .

Note that any time an exercise lists something as extra(or similarly worded), you must complete as part of the exercise.
There is a sandbox to run javascript code directly on eloquentjavascript.net (http://eloquentjavascript.net/code/). Submit which problems you do and *your* code for them.

a) Recursion:

```
function isEven(positiveNum){
        if(positiveNum==0){
          return true;
  }else if(positiveNum==1){
          return false;
  }else{
          return isEven(positiveNum-2);
  }
}
console.log(isEven(-1)); //RangeError: Maximum call stack size exceeded. (line 8 in function isEven)
Fix:
function isEven(num){
 if(num <0){
```

```
                    return isEven(-num);
            }else if(num==0){
             return true;
             }else if(num==1){
             return false;
    }else{
             return isEven(num-2);
    }
  }
```

```
b) function reverseArray(array){
  var newArray = [];
  for(var i = array.length-1;i>=0;i--){
             newArray.push(array[i]);
  }
           return newArray;
 }
 console.log(reverseArray(["A","B","C"]));
 //The switch of the first and last element
 function reverseArrayInPlace(array){
  for(var i = 0;i<Math.floor(array.length/2);i++){
             var temp = array[i];
     array[i] = array[array.length-i-1];
     array[array.length-i-1] = temp;
  }
  return array;
 }
 console.log(reverseArrayInPlace([5,4,3,2,1]));
 this one that function must return a value.
 //Arrays are objects and they are passing by reference.
 Return value is better than prints a line.
 var array[5,4,3,2,1];
 reverseArrayInPlace(array);
 console.log(array);
```

4. Since this is a draft edition, try to catch any errors you find and report them (if not already reported). This book is made available for free; the least we could do is help make it better! Summarize any errors you find (it's okay if you don't find any, but indicate so)