**9/21/2019**

**Review questions for lesson 1: Review of JavaScript Functions and Arrays**

1. **What is a global variable?**

Variables that are declared outside the scope of the function.

1. **Why should you avoid globals?**

Global variables can change with the other functions and other statements. So its good to avoid globals.

1. **What is shadowing?**

When the same named variable is declared in a loop or a function , that shadows the main variable, which is always good to avoid.

1. **Why should you avoid shadowing?**

It’s good to avoid to confusion and errors.

1. **What happens if a function is called and an argument is omitted?**

When the function is called and the argument is omitted the function will not be called but be passed around.

1. **What is a default value for a parameter? Give an example and explain how it is used.**

The default values of parameters are undefined.

1. **What happens if a function does not have a return statement?**

The output will be undefined.

1. **What happens if a function has a return without a value?**

The output will be undefined.

1. **What happens if there the value to be returned is on a newline after the return keyword?**

Javascript will automatically insert semicolon at the end and it will return undefined.

1. **We said that it would be bad if a function getAge showed an alert or printed out age in addition**
2. **to returning the age. Why is that bad? What design principles does it violate?**

The name of the function should have the definite one action name. This is bad because this creates confusion among another programmers who might be using this function thinking this might calculate the age of an individual.

1. **11. What is the command/query separation principle?**
2. **12. What is the 30 second rule for functions?**
3. **13. What does it mean to say functions are first-class objects?**
4. **14. What will appear in the console?**

function sayHi() { alert("Hi");}

console.log(sayHi);

console.log(sayHi());

func1 = sayHi;

func2 = sayHi();

console.log(func1);

console.log(func1());

console.log(func2);

myArray = [func1, func1()];

console.log(myArray[0]);

console.log(myArray[0]());

console.log(myArray[1]);

console.log(myArray[1]());

console.log(func2());

1. **15. What is the rule about where semicolons should appear in JavaScript code?**
2. **16. What is a ‘callback’? Give an example**
3. **17. What is the difference of a function declaration versus expression in JavaScript?**
4. **18. What are the JavaScript data types?**
5. **19. Why should you always use === instead of ==?**
6. **20. Why are pop and push more efficient than shift and unshift?**
7. **21. Why should you favor for..of loops instead of for loops with indices?**