5– Functions & Objects

1. BASIC FUNCTION

- Create a function that, when called, sends a popup with the message, “”Hello World!”
- Call your new function.

2. FUNCTION WITH PARAMETER

- Create a function that will send a popup with whatever message we pass to it.
- Call your new function and provide “My new function works!” as the parameter.

3. FUNCTION WITH MULTIPLE PARAMETERS

- Create a function that takes a course code and a teacher’s name, then sends a popup with the message: “TEACHER’SNAME teaches COURSECODE”.
- Call your new function and provide “Sean Doyle” and “5103” as the parameters.

4. FUNCTION THAT RETURNS A VALUE

- Create a function that takes a subtotal, adds the sales tax (13%), and then returns the new total (to two decimal places).
- Create a variable to hold the result of calling your new function with 10 passed as the parameter.
- Output the variable to the JavaScript console (answer should be 11.30).

5. CREATE AN EMPTY OBJECT

- Create a variable and assign it an empty object.

6. CREATE A VIDEO GAME OBJECT

- Create an object for a video game character/avatar.
- Initialize values for three properties: level (string name of level); livesLeft (integer); superSize (Boolean).
- Output each property to the console.

7. LEVEL UP

- Your character has advanced to the next level, but at the cost of one life.
- Programmatically (that is, by coding, not by manually changing the values) update the level, livesLeft, and superSize (reverts to false when killed) to their new values. For example, superMario.superSize = false;
- Output each property to the console.

8. BAKE IT IN

- Create a method (a function that is part of the object) for your object called **bonusLife**.
- When called, this method will add a life to the **livesLeft** property.
- Output the **livesLeft** property, call the method, then output the **livesLeft** property again.

9. MINI-GOLF SCORE CARD

- Create an object called **myScore** to track a player's score for a game of mini-golf.
- Properties are: **name**, **colour**, **score** (set to 0), and **scoreArray**.
- Create a method for this object, that takes score for the current hole and adds it to **score**, and inserts it in the score array. Finally, the method should return the updated **score**.
- Output the score to the console.
- Call the method with a score of 2; output the score to the console.
- Call the method with a score of 3; output the score to the console.
- Call the method with a score of 4; output the score and scoreArray to the console.
- The score should be 9, and the array should be [2,3,4].

SUPERSTAR CHALLENGE!!

Since this mini-golf course only has 9 holes, the method should check to make sure there are fewer than nine items in the array before inserting a new item.

My answers are below…

======= ANSWERS ==========

```
//==== 1. BASIC FUNCTION
function basicFunc(){
     alert("Hello World!");
}

basicFunc();

//==== 2. FUNCTION WITH PARAMETER
function customMessage(msgTxt){
     alert(msgTxt);
}

customMessage("My new function works!");


//==== 3. FUNCTION WITH MULTIPLE PARAMETERS
function getTeacher(course, teacher) {
     alert(teacher + " teaches " + course);
}

getTeacher("5103", "Sean Doyle");


//==== 4. FUNCTION THAT RETURNS A VALUE
function getTax(subTotal) {
     var total = subTotal * 1.13;
     return total.toFixed(2);
}

var test = getTax(10);
console.log(test);


//==== 5. CREATE AN EMPTY OBJECT
var myObject = {};


//==== 6. CREATE A VIDEO GAME OBJECT
var superMario = {
```

```
     level: "Haunted Castle",
     livesLeft: 2,
     superSize: true
};
console.log(superMario.level);
console.log(superMario.livesLeft);
console.log(superMario.superSize);


//==== 7. LEVEL UP
superMario.level = "Mushroom World";
superMario.livesLeft = 1;
superMario.superSize = false;

console.log(superMario.level);
console.log(superMario.livesLeft);
console.log(superMario.superSize);


//==== 8. BAKE IT IN
var superMario = {
     level: "Haunted Castle",
     livesLeft: 2,
     superSize: true,
     bonusLife: function(){
          superMario.livesLeft += 1;
     }
};

console.log(superMario.livesLeft);
superMario.bonusLife();
console.log(superMario.livesLeft);


//==== 9. MINI-GOLF SCORE CARD
var myScore = {
     name: "Sean",
     colour: "Blue",
     score: 0,
     scoreArray: [],
     addScore: function(thisHole) {
```

```
          myScore.score += thisHole;
          myScore.scoreArray.push(thisHole);
          return myScore.score;
     }
};

console.log(myScore.score);
myScore.addScore(2);
console.log(myScore.score);
myScore.addScore(3);
console.log(myScore.score);
myScore.addScore(4);
console.log(myScore.score);
console.log(myScore.scoreArray);

//==== 9. SUPERSTAR CHALLENGE
var myScore = {
     name: "Sean",
     colour: "Blue",
     score: 0,
     scoreArray: [],
     addScore: function(thisHole) {
          if(myScore.scoreArray.length < 9){
               myScore.score += thisHole;
               myScore.scoreArray.push(thisHole);
               return myScore.score;
          } else {
               return "Cannot add score, you have played 9
holes.";
          }

     }
};
```