**Advanced JavaScript**

1. How do you describe JavaScript as a language?
   1. Very light-weight
      1. No constructor
      2. No modularity
      3. Declare a variable
      4. Write a function, iteration, if-else statements
      5. Very few APIs – map, date, etc
   2. Basic data manipulations
2. How many data types are supported in JavaScript?
   1. 6 types
      1. number (NaN is of type number)
      2. string
      3. boolean
      4. object (null is an object)
      5. undefined
      6. function
   2. Only three number, string and boolean can be used to store data.
   3. Use typeof API to find type of a variable
   4. The number type supported by JavaScript is float
      1. Approximation
      2. Not Accurate
3. Category of JavaScript language
   1. Functional (limited ways)
      1. Functions are first class citizens (Functions are data)
      2. Can we do everything with functions that we do with data?
         1. Refer to ***functionsAsData.html***
   2. Dynamic
      1. Allows you to modify characteristics of object, once created
         1. Add attribute (obj.id = 100)
         2. Remove attribute (delete obj.id)
      2. Static – JAVA
   3. Loosely Typed
      1. Compiler does not provide a safety net for invocation of functions with arguments.
         1. Refer to ***looseTypeDemo.html***
      2. Exploitation of loosely typed language provides powerful functionalities.
         1. Example: $ in jQuery
         2. Refer to ***universalAdder.html***
4. Function instanceOf Object => true & Object instanceOf Function => true
   1. Why?!
5. Default return value of a function is “undefined”.
6. When a function is invoked in JavaScript, two implicit values passed to the function
   1. this
   2. arguments – array like object that get passed in the function call.
7. When a function is invoked as a method of an object, “this” refers to object, else “this” refers to global window object.
   1. “this” stores invocation concept
8. Use console.dir (<var name>) to get structure of object.
   1. Base class: ***\_\_proto\_\_:*** Object (toString method is available from here)
9. By default, functions in JavaScript come with functions
   1. Call – fn.call()
   2. Apply – fn.apply()
   3. Bind
10. Various methods to invoke a function
    1. Invoke as a method of object
    2. Invoke as regular method
    3. call – change context [ fn.call(obj, arg1, arg2…) ; this => obj ]
    4. apply – [fn.apply(obj, [arg1, arg2….])]
       1. Pass arguments list as array
       2. Use Apply when you want to convert an array of arguments to arguments list