**High Level Design (HLD) for a Spread of Disease Javascript Model**

**Overview**

This document presents the design specifications for a computer model written in Javascript that represents a real-world phenomenon of the spread of a disease through a population.

**Model Description**

Members of a population move in a constrained area. A percentage of the population starts off as infected. When an infected person meets a susceptible person, there is some percent chance that the disease will spread, changing the target person from being susceptible to being infected.

**Deliverable**

A Javascript model of the spread of disease as described above, running on your personal portfolio website.

**Due Date**

Saturday, February 16, 2013, at 1:00 PM EST.

**Ideas/Suggestions**

* You can represent the constrained area with an **HTML5 canvas** or a grid of <div> and <span> elements.
* You can represent people using Javascript **objects** or **variables**.
* You can store the collection of people in a Javascript **array**.
* You can simulate randomness, such as the percent chance of spreading the disease, using Javascript’s **Math.random() function**.
* You can simulate the “state” of the person (susceptible or infected) by any **data type** you choose (e.g. numbers, strings, Booleans, characters). You can also represent the state visually using colors, letters, or numbers.
* You can write Javascript **functions** to organize your code into manageable chunks.
* To simulate the passage of time, you can use Javascript’s **setInterval()** and **clearInterval() functions**.
* You can use **comments** to explain sections of code.

**Pearls of Wisdom***(thanks to Charlie Peck for these)*

* “Days of debugging can save hours of design and planning.”
* “Good code is not written, it is re-written.”