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**HW 1: Design Document**

**Allocate\_map –** This function has no parameters and returns an int (doesn’t need to be specified in Javascript). The function takes the value of the difference of the pids and initializes a data structure (array) with the amount of the difference.

**Allocate\_pid** – This function has no parameters and returns an int. The function takes the data structure and checks to see if there is a pid that has been initialized but not allocated. If it finds one, the function then allocates it.

**Release\_pid -** This function has an int parameter (type doesn’t need to be specified in Javascript), and returns nothing. The function releases the pid of the int parameter.

**Call** – This function has no parameters and returns nothing. This just tests the function to see if it works.

**Sleep** – This function has a float parameter and returns a promise. It allows a function to complete stop for the random number of milliseconds given.

**ThreadManager –** This function has no parameters and returns nothing. First, we allocate the pidArray, then opens a pid. Now it sleeps for a random amount of time after it releases the pid.