This document describes functions used in the photon project. Each function should be described in terms of the following template:

|  |
| --- |
| **int myFunction(int a, int b)** |
| **File:** someFile.c |
| **Description:** This function takes two integers, a and b and does nothing with them.. |

|  |
| --- |
| **array resizeArray(array, scale)** |
| **File:** |
| **Description:** This function takes an array and a power of 2 scale factor and resizes the array accordingly. If the scale factor is positive, each dimension of the array should grow by that factor, if the scale factor is negative, each dimension should shrink by that amount. In the case of a positive scale factor, missing elements should be linearly interpolated. All input arrays will have power of 2 dimenisonns. If this process is done twice (i.e., increase by +s followed by a decrease by –s), the result should be the original array. This need not hold for the reverse case (-s followed by +s). |

|  |
| --- |
| **struct readControlFile(filePath)** |
| **File:** |
| **Description:** This function reads in information from a control file, containing all the parameters needed to initialize the simulation, and stores them in a structure. Each field in the structure will correspond to a line in the input file—for example, a line from the input file might read “Name: ‘someSimulation’”, where the string would then be stored in the “name” field of the “simulation” structure. This code need not be fast since it only runs once, and should be designed for maximum flexibility in adding new fields—ideally, the field could act as the argument for a switch statement that then routes that line of text to the appropriate parsing code. |