

## **ECLIPSE-R PROJECT 1**

EclipseR.cpp – This class includes the main function. The main function has a data reading loop that can read many data files and a data manipulation loop for sorting and searching through eclipses. It also outputs user specified eclipses to the console or a data file.

EclipseR.h – I introduced this class to create helper methods for main. It consists of an Enumerator for month to ease the searching for months, and a makeshift templated simple sorting algorithm with not very good time complexity right now, but will be better when the cost is worth more. I also have a makeshift templated simple searching iteration to find customized arrays for output.

Eclipse.cpp – This Class contains the functions for the Eclipse object. I made each variable reachable through accessor functions.

Eclipse.h – This object was most manipulated since last lab. I used the constructor for processing the data line so main can be clear of clutter and the constructor in main doesn't have 18 different variables in it. I also used 18 different variables to store the data this time as apposed to an array for readability and easier debugging. It also give the programmer more control over the accessed variables within the object.

ResizableArray.h – A templated array for storing any kind of variable. I used the array to store the eclipses of the data file and I also made the eclipses mostly unreachable so data cannot be inversely manipulated.