* **Author/Authors:** The extra credit assignment may be completed individually or in a pair.
* **Motivation**: In a paragraph, explain your motivation for choosing this particular extra credit assignment and what code you are expanding from.
* **Purpose**: Provide a short, but formally written, description of the software you have created and its purpose.
* **Audience**: Describe the intended audience of users and the main usability goals (i.e. how the expected users will benefit from your extra credit assignment)
* **Instructions:** Explain how to use your program and/or play your game.
* **Design**: Using CRC cards, pseudocode, and/or a mixture, create a design plan which meets the computational requirements.
* **Enhancement**: Briefly describe exactly what enhancements you made in creating this extra credit assignment.
* **Functionality**: A list of the extra credit assignment's primary functionality and characteristics.
* **Files**: A list in bulleted form of the names of all files submitted (source code and input, etc.)
* **Utilized Data Structures:** As mentioned above, this extra credit assignment must effectively use classes as well as one or more data structures studied in this course.  In this section state which data structure(s) you have used, discuss why you believe these were appropriate choices, what alternate structures you might have used in its place, and why you made the choices you did.
* **Big O Analysis:** Choose a section of code which makes important use of a data structure explored in this course. Clearly mark this section of code so that it can be referenced here.  Compute and explain Big O analysis on that section of code.
* **Resources**: Using a formal standard for documentation, list all software resources utilized in the making of your extra credit assignment (platform, language, libraries, tools, etc.,) and describe and how you integrated the ideas or code into your program.
* **Challenges**: The challenges that you encountered during this extra credit assignment’s development.
* **Testing**: A list in bulleted form of all input values or unit tests used for testing. Here you should be careful to select representative input cases, including both representative typical cases as well as extreme cases.
* **Errors**:  A list in bulleted form of all known errors and deficiencies.
* **Measures and Assessment**: An outline of extra credit assignment measures of success, how well you believe this extra credit assignments meets these measures.
* **Summary**: A brief summary description of the design and implementation, including how much your initial design plan evolved, the final result you achieved and the amount of time you spent as a programmer in accomplishing these results. This should be no more than two paragraphs.
* **Comments**: A paragraph or so of your own comments on and reactions to this extra credit assignment.