**Scope:**

* Develop a Battleship mini-game of grid size 10 by 10 using Java GUI.
* Satisfy all criteria and requirements on the rubric (Listed in the deliverables)
* Project management skills and object-oriented programming concepts will be used throughout the development of this project.

**List of deliverables:**

* AI and expert AI opponent
* Efficient methods, OOP concepts
* File I/O to keep track of opponents’ ship location/strategy
* Have 5 different ships which can be placed on a GUI grid (5 block carrier, 4 hole battleship, 3 hole cruise, 3 hole submarine, 2 hole destroyer)
* Determining Hits, misses, and scores with an optional timer on GUI
* GUI user interface
* Project management documents, GANTT chart, project charter, algorithm, individual daily activity rolling charts, execution plans, document of meetings/checkpoints, individual reflections

**Risk Management:**

* In case computers and laptops have malfunctioned or broken down, save data on google docs or backup drives and borrow computers from school/school board
* In case debugging or coding the algorithm is taking longer than expected, ask for an extension beforehand, also try various strategies. For debugging, commenting out parts and using print statements, for coding algorithm use more loops, methods, or just copy and paste for repeated places
* In case time is not enough because of other assignments and obligations, ask for extension for the project or these other assignments, or stay up later to have more time
* In case one person of the group is unable to assist in the project (for example because of a cold or injury) ask for an extension and divide his duties equally among the rest of the group
* In case the program works but is too slow, refine code by cutting out unnecessary parts that are not stated in the rubric and list of deliverables

**Change Management Steps:**

* A shared Google Doc will be created to keep track of changes made to the algorithm during the coding process
* Each member will record their changes on the doc including the date modified, the original version, and changes made.
* During the daily meetings, times will be allocated to discuss these changes to make sure all members are caught up.
* Meetings will be held if there are major changes or sudden incidents (refer to risk management)