Initial Requirements

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| **Item** | **Possible Points** | **Comments** | **Score** |
| Requirements for game rules | 3 |  |  |
| Input/output requirements | 3 |  |  |
| Other requirements | 3 |  |  |
| Requirements naming, using ‘shall’, professional tone | 3 |  |  |
| Style, grammar, spelling | 2 |  |  |
| Group work: time logging, meetings | 1 |  |  |
| |  |  |  | | --- | --- | --- | | **Meeting** | **Date** | **Present & Contributing** | | Initial discussion | 2/17/2012 | Dillon Hiatt, Chris Wald, Harry Schultz, Zach Gerner | | Review before 1st submission | 2/17/2012 | Dillon Hiatt, Chris Wald, Harry Schultz, Zach Gerner | | Final Review |  |  | | | | |
| Total | 15 |  | 0 |

IO: Input / Output and Interface

G: Gameplay

CP: Computer Player

R: Miscellaneous

IO - 1 : The program shall display to a monitor.

IO - 2 : The program shall receive input from the mouse.

IO - 3 : The program shall prompt the user to start the game on start-up.

IO - 4 : The program shall have an exit option available at all times.

IO - 5 : The program will display two grids to the user.

IO - 5.1 : One grid shall display the user’s buildings and the computer’s guesses while the other displays the user’s guesses.

IO - 5.2 : The grids shall be 10 by 10 units.

G - 1 : The user shall be prompted to place their buildings on their bottom grid.

G - 1.1 : The buildings cannot overlap each other

G - 1.2 : The user will place 1 5 unit building, 1 4 unit building, 2 3 unit long buildings, and 1 2 unit building.

G - 1.3 : All the users buildings must be placed.

G - 1.4 : The user shall be able to orient their buildings either horizontally or vertically.

G - 1.5 : After this phase the user shan’t be able to move their buildings.

G - 2 : The user shall guess where the opponent’s buildings are hidden by using the top grid.

G - 2.1 : The program shan’t allow the user to select the same grid tile twice during a game.

G - 2.2 : The program shall mark the selected grid tile with a color corresponding to the location of the opponents buildings.

G - 2.2.1 : If the selected tile corresponds to a building on the opponents grid it will be marked a color.

G - 2.2.2 : If the selected tile corresponds to open space on the opponents grid it will be marked with a different color than G - 2.2.1.

G - 2.3 : When all tiles of an opponent’s building are marked, the program shall mark those tiles a different color than used in G - 2.2.

G - 3 : The game shall be played between one human user and one AI computer player.

G - 4 : The user and computer shall alternate turns.

G - 5 : The game shall end when all of one player’s buildings have been uncovered.

G - 5.1 : The player who uncovered all of the opponents buildings is victorious.

CP - 1 : The computer player shall guess randomly until a “hit” is acquired

CP - 2 : Once a “hit” is acquired the computer player shall begin guessing to the north, east, south, and west of the “hit”

CP - 2.1 : Guessing around the original “hit” shall stop once a second hit is acquired.

CP - 2.2 : If the “hit” is against an edge then the first guesses shall be along that edge (e.g. if the hit is on the northern edge the first two guesses shall be east and west)

CP - 2.2.1 : Requirement CP - 2.2 shall be violated if the majority of found buildings are oriented in the same direction as the edge.

CP - 3 : Once the orientation of the building can be determined (by two “hits”) the computer player shall continue guessing in that direction.

CP - 3.1 : If a “miss” is acquired before an entire building is found the next guess shall be one off from the original “hit” in the opposite direction of the preceding hits (if possible).

CP - 4 : If an entire building is uncovered the computer player shall begin guessing randomly again.

CP - 5 : If two “misses” are acquired after attempting to uncover a building the computer player shall begin guessing randomly again.