Version Timeline

1. convertArrayToSTL\_v1
   1. converts string arrays (names and p2names) to unordered\_set containers
2. convertArrayToSTL\_v2a
   1. Converted unordered\_map to map, so I could sort on topPlayer container.
   2. Changed map topPlayer pair to (int, string) , so the container sorted the scores in descending order.
      1. map<int, string> topPlayer(pair(hiScore ,“name”)
   3. Problem: Couldn’t figure out how to find a person’s name when name was the value.
3. convertArrayToSTL\_v2b
   1. Changed map topPlayer pair to (set<string>,list<float>), so I could find a name
      1. topPlayer(pair(“name”, hiScore)
4. battleship\_v1\_BROKEN
   1. Game is based off my cis5\_project\_2\_battleship\_v6 code.
   2. Added convertArrayToSTL\_v2b and it broke it.
5. battleship\_v2
   1. Game is based off my cis5\_project\_2\_battleship \_v6 code.
   2. Ran the original code to make sure the game worked. Then I commented everything out and added convertArrayToSTL\_v2b. It works.
   3. Converted set2Upper() to use mutating algorithm. Updated getName() with set2Upper().
   4. Converted scores array to a set and then created a list with a couple of values, and then copied the set into the list using copy() and insert\_iterator.
6. convertArrayToSTL\_v3
   1. Converted scores array to a set and then created a list with a couple of values, and then copied the set into the list using copy() and insert\_iterator.
   2. Copied the updated setTopPlyrs() to battleship\_v2.
7. battleship\_v3
   1. Created shuffleThis(). It works on arrays, but not on a set container.
   2. so I created getMin() and used std::min() to find the shortest name between 2 strings and then set player 2’s name in main().
8. convertArrayToSTL\_v4
   1. Converted guess char array to a stack container.
   2. Counted num ships. You need at least 3 ships in a container to eventually get a winner.
   3. Copied working version into battleship\_v4
9. battleship\_v4
   1. Created a menu that allows user to view CIS17-C concepts applied to the game or to play Battleship but with char arrays.
   2. Concept’s function contains all the project requirements in one location.
10. battleship\_v5
    1. Implemented queue with number of ships each player has.
    2. queue<string> ships, setShips(), prntQue()
    3. Added constructor() to prepare to implement Classes
    4. Changed pushName() to setSet() and reduced some redundant code
    5. setStack() initializes a stack with a list
       1. Can I initialize stack with linked list and then access the link’s pointer member? NO, you can’t.
11. convertArrayToSTL\_v5
    1. Deleted everything and copied all the STL functions from battleship\_v4 to this program because I want to add these cis17c concepts to my one of my games that is already in classes and is completely working.
    2. The problem with battleship\_v5 is that the game functions aren’t in classes in this version because I based it off my cis5\_project\_2\_battleship.
    3. setStack() sets stack with list
    4. prntStckFIFO()
    5. prntStckRev()
    6. Tried reverse stack with reverse() and recursive insert\_at\_bottom() but couldn’t get it to work.
12. convertArrays\_to\_STL\_v6
    1. Looking highest score in map<>topPlyr
    2. Passed map reference to topPlyrs()
    3. Problem: Couldn’t get ostream to work in getName() with a list or a vector or with stream.
13. convertArrays\_to\_STL\_v7
    1. Added MySTL class
       1. Constructor:
          1. Initialized all the STL concepts in the constructor and start()
14. convertArrays\_to\_STL\_v8
    1. Changed queue nShips to deque and used random access iterators to print it forward and backwards.
    2. Convert int \*indx to a deque for Game class
    3. Filled a list with integers 0 to member variable: size and then shuffled indx in shuffleThis(deque<int>)
    4. Problem: Couldn’t get shuffle or random\_shuffle to work with an unordered set.
    5. Declared Game and User destructors virtual
    6. Completed Iterators off project checklist.
    7. Checklist is complete.
    8. Problem: Deleted excel and word desktop apps from my laptop
15. battleship\_v6\_addYahtzeeMySTL
    1. Combines cis17b\_yahtzee\_v29\_presentation AND convertArrays\_to\_STL\_v8
    2. Copied my cis17b\_yahtzee\_v29\_presentation because I need the game to be in classes.
    3. Copied MySTL class from convertArrays\_to\_STL\_v8
    4. Made User destructor virtual
    5. Added menu2 function that ask’s user if they want to view CIS 17C concepts applied to project or if they want to play the game.
16. cis5\_project\_2\_battleship\_v7
    1. Added Game class and move everything in main to Game class.
    2. Nightmare trying move all of the code in main to functions and then into a class.
       1. Board class creates and prints 2 static char 2D arrays for each player: board1, board2.
       2. Moved everything in main to Battleship class. I commented everything out and will uncomment one section at a time.
       3. This version and the prior had great parts to it, but they were lost later when I had to introduce classes. I had never used classes before, so the quality of my game deteriorated.
17. cis17a\_project\_2\_v6\_gameClass
    1. Created Game class and moved all of Scores class that was in main to it.
    2. I was new to classes, so my game lost functionality from the cis5 versions.
    3. Battleship class works. It has some minor bugs that need to be fixed later. I left comments and a to-do list in main.
18. cis17a\_project\_2\_v7\_gameClass
    1. Moved code in Score class to Battleship.
    2. Renamed Choices class to Board class.
19. battleship\_v7\_addBattleship
    1. use Yahtzee class as a template for battleship
    2. Add Battleship class, so it can have access to User and Admin classes.
20. Dilemma: I have to games in class, but which do I convert using STL containers?

To do:

* setSet(): make fnames.insert( pair(index,name));
* Add classes. Use Yahtzee\_v29 and cis17a\_project\_2 as guides.
  + Player, Game, Board
  + Add structures for Board
    - 2 game boards, 2 guess boards
* Changed guess container from a stack to map
* iterators
* Change set<float>s to a: array, map, or linked list

Before submitting:

* Uncomment cin inside of getName()

After submission:

* Clean up code that had to be included to meet project 1 requirements.