Our group decided to use the Inspection approach for our project. We decided to use this approach because it had a very structured approach to how the meeting would work. A date and time were set for the group to meet and discuss the code so that each group member could review that specific piece of code before the meeting. We decided to focus on the Card game as that is where we were having most of our troubles with solving the bugs. During the meeting everyone brought their list of respective solutions to the bug that was found in the Card game code. Since the card game was under Will we had him be the leader of the inspection. After much debate we settled on changing the card game from an array of pointers to using the dynamically allocated arrays of vectors to keep track of the cards. By using Vectors to keep track of the card it solved the other issues that we were having in the game that happened when a card was moved from one hand to the next. After this Will presented the fix that he had made to the group at our next team meeting. He showed all the different ways he had tested the program including which tests had passed and which ones had failed under the new vector-based card deck. Since, under the guidance provided by the lecture notes, more than 5% of the game had we had the entire group retest the entire program to make sure that nothing else in the game had broken. After finding no new error we had the entire group retest the Card game itself to see if we could try and find any other bugs that we had not found before. After not finding any major bugs that we hadn’t found beforehand we concluded the code review session. Listed below is the breakdown of the bug, who was assigned the bug and how the bug was fixed and why it was fixed in that specific way.

Fault Detected

* Array of cards was throwing a segmentation error

Description

* When the deck of cards was setup as an array the program would always try to read a location not contained in the array and would cause a read access violation to be thrown. We believed that this was occurring because the system was getting a value from the array to check on but the was not actually contained in the array.

Assigned to fix the error

* Will Wyndrum

How was the fault fixed

* The fault was fixed by changing the deck of cards from an array implementation to vectors that allowed for a dynamically allocated array. By setting the hands up as vectors instead of arrays it allowed us to completely get rid of the segmentation error that was occurring in the program. This also, inadvertently, helped solve another issue that would have made the code more complex due to another method need to be created. By using the dynamically allocated arrays that are vectors it allowed for the players and dealers hands to grow and shrink without needing to make new arrays every time a hand changed in size.