

## **CS246 Final Project – Demo**

The game that I have done for my final project is Straights. When executing the following test files, use `./straights 4 < (test file here): test0.txt, test1.txt, test2.txt, test4.txt, test5.txt`. When executing the following file, use `./straights 10 < (test file here): test3.txt`. Any other tests will have a randomly generated seed.

I will now go step-by-step through each test case and explain which features they highlight. All tests can also be run with `valgrind ./straights 4 < (test file here)` or `valgrind ./straights 10 < (test file here)`.

### **test0.txt / test1.txt**

The main purpose of these tests are to ensure that my computer players worked correctly. In `test0.txt` there are no human players, just four computer players who make their automatic moves. The player with the 7 of spades begins the game, and then the turns continue to cycle through all players.

To better see how the computer makes its move, `test5.txt` will first start with two human players (and two computer players), display the deck, then `ragequit` for both players before the human player plays/discards any cards. This way, you can view the deck that is being used throughout most of the tests as well as how the computer plays. Once a human `ragequits` and the computer takes over, the first move made by the new computer is to play the first legal move in its hand or discards the first card in its hand. In this test case, Player 1 starts with the 7S and is a human player that `ragequits`; therefore it plays 7S, the first and only legal move in its hand. The next human player is Player 3, who has no legal moves. After Player 3 `ragequits`, it discards the first card in its hand.

### **test2.txt**

This test displays what happens when a human player attempts to play a card that is not legal, attempts to discard when a player has legal moves, inputting incorrect commands, displaying the deck, and `ragequitting`.

If a player attempts to play a card that is not legal (either in their hand or not) my program displays a user friendly message saying “This is not a legal play” and then allows the user to enter another command.

If a player types in a command that is not one of the five listed, the program will display a message saying “Improper command. Please try again.” then allow the user to enter another command.

If a player attempts to discard a card while having legal moves, the program will display a message saying “You have a legal play. You may not discard.” then allow the user to enter another command. I did not implement error-checking for valid syntax and ensuring that the card is in the player’s hand for this command, so we must use the assumptions stated in the assignment (that the card is valid syntax and that the card is in the player’s hand).

If a player enters the command “deck” the contents of the deck is displayed in order, 13 cards per line. As with the previous test cases, when a player ragequits a computer takes over.

#### **test3.txt**

This test was created to test the entire playthrough of straights with at least one human player remaining by the end. It starts with 4 human players, and as the game progresses 3 of the 4 players ragequit, with only one human player remaining when the game concludes. This tests the scoring implementation of human players, as well as a mix of human and computer players. Lastly, this test case continuously prints out how the table is updated as players make their moves. It shows how after a round is over the table is cleared and points are added accordingly until a player scores > 80.

#### **test4.txt**

This test was designed to test the “quit” command used by human players. It begins with two human players, one card is played by a human and one is discarded before player 1 ragequits and then player 3 quits the game. This was done to see how my program handles leaving the game mid-way through, when cards are already on the table and in the discarded pile, as well as converted players.

#### **test5.txt**

Similar to the previous test case, this one is used to see what happens if there are no cards played but there still exists one human player who has not yet ragequit.