

Demo

My straights game executable can take up to 1 command line argument. It can take a seed for the random generation, if no command line argument is present, it will create its own based on the time.

To test all implementations we will use a constant seed to ensure repeatable results (e.g. ./straights 50)

Immediately after, the user is prompted to make each of the 4 players a human or a computer by inputting "h" and "c". For the first test we can choose 4 human and 0 computers. (ANY OTHER INPUTS WILL LEAD TO ERRORS)

When a round starts, it will start with the player that has the 7 of spades.

If the player has legal plays, we can test that discarding any card will not work and it will remain the players turn until a valid command is given. We can also test playing a card that is not a legal play is invalid as well.

If the player has no legal plays, we can test playing cards will not work.

This holds true for all 13 rounds that each player will play.

At any point if all test cases have been tested, we can test the ragequit command. In this command the human leaves and the computer takes over with everything that the human had. From this it is also easy to see that the computer is playing the first legal play in its hand and if no legal plays are present, it is discarding the first card in its hand.

After 52 of turns are played, we will see the game update all players' scores and output them to the screen. Another round will start if the scores are under 80. The deck will be reshuffled and dealt.

If a single player has a score of 80 or over the game will end and the player(s) with the lowest score will be printed as winners in order of player number.

Additionally, we can run the program again to test computers without the ragequit function by adding computers from the start instead of humans.

Another thing to test would be the deck shuffling, we can start a program with a random seed add humans, print the deck using the deck command and quit the program. Doing this will show us different shuffles of the deck from different seed and ensuring the deck is fully functional.