

## Demo- All results were compared with the given executables and all cases matched

Test 1: Consistent Results with all Computer Players, New round points/ and card discarded

Command Line Argument: any number (3 is the number I did it with), asks type of player, 7S first move

Input:

c  
c  
c  
c

```
Is Player1 a human (h) or a computer (c)?  
c  
Is Player2 a human (h) or a computer (c)?  
c  
Is Player3 a human (h) or a computer (c)?  
c  
Is Player4 a human (h) or a computer (c)?  
c
```

*Player Type*

```
Player1's discards: 2S QD KC  
Player1's score: 65 + 27 = 92  
Player2's discards: 9D TD JD  
Player2's score: 50 + 30 = 80  
Player3's discards:  
Player3's score: 18 + 0 = 18  
Player4's discards: AS AC KD  
Player4's score: 79 + 15 = 94  
Player3 wins!
```

*Player with  
lowest score one*

```
A new round begins. It's Player2's turn to play.  
Player2 plays 7S.  
Player3 plays 6S
```

*Plays 7S at start*

*Score after each  
round*

```
Player1's score: 47 + 18 = 65  
Player2's discards: 8H QH TH KC  
Player2's score: 7 + 43 = 50  
Player3's discards: 9H  
Player3's score: 9 + 9 = 18  
Player4's discards: 4D 3H QC AH JH AD 2D  
Player4's score: 45 + 34 = 79
```

First you will see that it gives choice for the type of player. Next you will notice that player with 7S starts. By writing the following you will have all the rounds completed and the program will terminate once a least 1 player has accumulated a score more than 80. At 79 points by player 4 game did not end. At the end of the round you will see all the players' score, the player that has won will also has the lowest score. After each round you will see points and cards discarded and then the player who started the round.

Test 2: Human only game works properly

Run command `./straights 3 <test2.in`

All the same cards were played in by the computer in the example above, are played by the humans and you will notice that the results for the score is the exact same, the legal moves are the same, and etc. This consistent result assure that running the program with humans and computer works. Thus the screenshots above match but now it displays their hand and legal moves. This shows that both play and discard works correctly.

Test 3: Deck, ragequit, play, discard, deck works, Each player dealt 13 cards

Command-Line Argument- 1

Input:

h

h

h

h

play 7S

deck

ragequit

play 7D

play 6C

play 6D

play 4D

discard QS

ragequit

ragequit

ragequit

```
A new round begins. It's Player4's turn to play.
Cards on the table:
Club:
Diamonds:
Hearts:
Spades:
Your hand: AD 6D TS 9C 8S 2H KS 4D 5D QC 7S 6S 5S
Legal plays: 7S
play 7S
Player4 plays 7S.
```

```
Your hand: 9H 3H KH 7C 3S 8H 5C QH 8D TH 2D TD 3C
Legal plays: 7C
deck
9H 3H KH 7C 3S 8H 5C QH 8D TH 2D TD 3C
6H 3H 7D 5H 2S 4C JC KD 8C 7H JS AS QD
QS KC 9D 4S 4H 6C JD AC AH 9S 2C TC 3D
AD 6D TS 9C 8S 2H KS 4D 5D QC 7S 6S 5S
ragequit
Player1 plays 7C.
Cards on the table:
```

```
Legal plays: 4C 8C 7H
play 4C
Player2 plays 4C.
Cards on the table:
Club: 4 5 6 7
Diamonds: 6 7
Hearts:
Spades: 7
Your hand: QS KC 9D 4S 4H JD AC AH 9S 2C TC 3D
Legal plays:
discard QS
Player2 discards QS.
```

1. You will notice all the cards on table are displayed and it is obvious at start. And the only card the player can choose is 7S, and the hand has 13 cards each start of round. Then you will notice 7S gets added to cards played. By writing deck all the cards can be seen. The ragequit command will stop asking for command for that player and the only card which is 7C. After a few turns there are no turns and the player 3 must discard. You will notice in the round summary it says QS for player 3. Finally by ragequit the computer will take over and a final score will be computed.

Test 4: quit works

Command-Line Argument- 1

Input:

h

h

h

h

quit

After the quit command the program terminates immediately no score or any result is displayed

Test 5: Does not let you discard when legal move, or play illegal card

Commandline argument: 1

Input:

h

h

h

h

play AD

discard 6D

play 7S

quit

```
Your hand: AD 6D TS 9
Legal plays: 7S
play AD
Not valid
discard 6D
Move doesnt exist
play 7S
```

This example shows that the program does not allow you to play a card that is currently not valid, or discard if a valid move exist. You will get an error message 'not valid' and 'move doesn't exist' respectively.

Test 6:

If you run

./straights twice with input:

h

h

h

h

quit

the hands will almost always be different almost impossible for them to be the same!