Demo

Allowed Command:

| Command | Description |
|-----------------------|--|
| play <card></card> | Play the specified card. <card> has valid syntax <rank><suit> like AC,7D.</suit></rank></card> |
| | This specified card can be any cards but if it is not in the player's hand, print: |
| | This card is not in your hand! |
| | If the play is legal, print: |
| | Player <x> plays <card></card></x> |
| | and proceed to the next player. Otherwise, print: |
| | This is not a legal play! |
| | > |
| | and do not proceed to the next player until a legal play is made |
| discard <card></card> | If the player has no legal plays, discard the specified card from the player's hand in |
| | to the player's discard pile. <card> has the same syntax as the <card> above.</card></card> |
| | Player <x> discards <card>.</card></x> |
| | Otherwise, print the following error message: |
| | You have a legal play. You may not discard. |
| | > |
| deck | Print the contents of the deck in order, 13 cards per line. |
| quit | Terminate the program immediately. |
| ragequit | Filled with anger, a human player decides to leave! Print the following message: |
| | Player <x> ragequits. A computer will now take over.</x> |
| | Replace the current human player with a computer player, and resume the game. |
| change player <x></x> | Someone wants to join the game! Choose a computer player and replace the computer |
| | player with a human player. The hand cards, discard cards and scores are remained. |
| | Player <x> joined the game!</x> |
| | If the input player is a human, print the error message: |
| | Player <x> is human!</x> |
| restart | Someone wants to remake this round! |
| | Start voting. If more than half human players agree, restart a new round of game. The |
| | previous scores remained. |

Example:

play <card>:

| Cases | <card> is legal:</card> | <card> is illegal:</card> | <card> not in hand:</card> |
|---------|------------------------------|------------------------------|-------------------------------|
| Display | Cards on the table: | Cards on the table: | Cards on the table: |
| | Club: | Club: | Club: |
| | Diamond: | Diamond: | Diamond: |
| | Heart: | Heart: | Heart: |
| | Spade: | Spade: | Spade: |
| | Your hand: 2C 3C 6C JC AD 7D | Your hand: AC 2C 5C QC 8D 5H | Your hand: 2C 3C 6C 8C 5D 9D |
| | TD 8H QH AS 5S 7S 8S | 7H KH AS 2S 7S 9S JS | 3H 5H AS 2S 3S 5S 7S |
| | Legal plays: 7D 7S | Legal plays: 7H 7S | Legal plays: 7S |
| | player1's turn to play | player1's turn to play | player1's turn to play |
| | >play 7D | >play 2C | >play AC |
| | Player1 plays 7D | This is not a legal play! | The card is not in your hand! |

discard <card>:

| Cases | no legal plays | have legal plays | <card> not in hand:</card> |
|---------|---|---|---|
| Display | Cards on the table: Club: 7 8 9 Diamond: 7 Heart: 7 Spade: Your hand: QC KC 2D TD QD AH 5H TH 2S 3S 5S 9S Legal plays: player1's turn to play >discard 2D | Cards on the table: Club: Diamond: Heart: 7 Spade: Your hand: 7C QC KC 2D TD QD AH 5H TH 25 35 55 95 Legal plays: 7C player1's turn to play >discard QC | Cards on the table: Club: Diamond: Heart: 7 Spade: Your hand: 7C QC KC 2D TD QD AH 5H TH 2S 3S 5S 9S Legal plays: 7C player1's turn to play >discard AC |
| | Player1 discards 2D | You have a legal play. You may not discard. | This card is not in your hand! |

deck:

Cards on the table:

Club: Diamond: 7 Heart: Spade: 6 7

Your hand: 4C 5C 6C 7C JC 6D JD QD 4H 6H 8S TS QS

Legal plays: 7C 6D 8S player1's turn to play

>deck

TS 6D 5C 6H 4H 7C JC 6C QD 4C QS 8S JD 9D 2S KS AS JS 7S TC 5S 4D 3C QH TD 5D 9C KH 4S AC TH 8C 8D 2D 2C QC JH KC 6S 3S KD 8H 5H 3D 3H 7H 7D 9S 9H 2H AD AH

ragequit:

Cards on the table:

Club: Diamond: 7 Heart: 7 Spade:

Your hand: 4C 5C 8C TC KC 5D QD KD 4H 8H AS 4S KS

Legal plays: 8H player1's turn to play

>ragequit

Player1 ragequits, A computer will now take over.

change player<x>:

| Cases | <x> is computer</x> | <x> is human</x> | <x> invalid</x> |
|---------|------------------------------|------------------------------|------------------------------|
| Display | Cards on the table: | Cards on the table: | Cards on the table: |
| y | Club: | Club: | Club: |
| | Diamond: 7 | Diamond: 7 | Diamond: 7 |
| | Heart: 7 | Heart: 7 | Heart: 7 |
| | Spade: | Spade: | Spade: |
| | Your hand: 4C 5C 8C TC KC 5D | Your hand: 4C 5C 8C TC KC 5D | Your hand: 4C 5C 8C TC KC 5D |
| | QD KD 4H 8H AS 4S KS | QD KD 4H 8H AS 4S KS | QD KD 4H 8H AS 4S KS |
| | Legal plays: 8H | Legal plays: 8H | Legal plays: 8H |
| | player1's turn to play | player1's turn to play | player1's turn to play |
| | >change player4 | >change player4 | >change player5 |
| | Player4 joined the game! | Player4 is human! | There is no player5 |

restart:

Player 1,2,3 are human players:

| Cases | Agree to restart | Don't agree to restart | Restart second | Restart 3 times or |
|---------|---|--|---|---|
| | | | time | more |
| Display | Cards on the table: Club: Diamond: 7 Heart: Spade: 7 Your hand: 2C 5C 6C 7C JC 6D JD AH 4H 7H TH QH JS Legal plays: 7C 6D 7H player1's turn to play >restart Do you player2 agree to restart? (y or n) y Do you player3 agree to restart? (y or n) y A new round begins. It's Player4's turn to play. | Cards on the table: Club: Diamond: Heart: Spade: Your hand: 9C QC 2D 3D 5D TD JD 5H 7H 8H KH 7S KS Legal plays: 7H 7S player1's turn to move >restart Do you player2 agree to restart? (y or n) n Do you player3 agree to restart? (y or n) n restart not agreed | Cards on the table: Club: Diamond: Heart: Spade: 7 Your hand: AC 3C 8C TC KC 9D JD QD KD 5H 8H KH 8S Legal plays: 8S player1's turn to move >restart You have restarted | Cards on the table: Club: Diamond: Heart: Spade: 7 Your hand: AC 3C 8C TC KC 9D JD QD KD 5H 8H KH 8S Legal plays: 8S player1's turn to move >restart Player1 plays 8S |

The test files are:

suite.txt play_and_discard.args play_and_discard.in play_and_discard.out deck1.args deck1.in deck1.out deck2.args deck2.in deck2.out deck3.args deck3.in deck3.out ragequit1.args ragequit1.in ragequit1.out ragequit2.args ragequit2.in ragequit2.out change1.args change1.in change1.out change2.args change2.in change2.out restart1.args restart1.in restart1.out restart2.args restart2.in restart2.out

complex1.args complex1.in complex1.out complex2.args complex2.in complex2.out