Example of a game with 2 players in action

(I cannot replicate this because I do not have a set seed feature)

Noteworthy comments indicated by //.

To find the parts of the code I want to highlight, please do CTRL+F and search for "//" (with no quotations)

Also, this example is long, but at the bottom after I've demonstrated the normal mode I have an example of testing mode too.

This code was copy and pasted directly from the terminal:

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f93li@ubuntu2004-008:~/cs246/s21/final/project$ ./hydra

How many players?

2

Heads:

1: 5 (1)

            // first move automatically done for the first player

Players:

Player 1: 53 (53 draw, 0 discard)

Player 2: 54 (54 draw, 0 discard)

Player 2, it is your turn.

Heads:

1: 5 (1)

Players:

Player 1: 53 (53 draw, 0 discard)

Player 2: 53 (53 draw, 0 discard) + 1 in hand, 0 remaining, 0 in reserve

Player 2, you are holding a 6S. Your move?
1   **// player has no choice but to cut off the first head**

Heads:

2: 6 (1)

3: 9 (1)

Players:

Player 1: 53 (53 draw, 0 discard)

Player 2: 53 (51 draw, 2 discard)

Player 1, it is your turn.

Heads:

2: 6 (1)

3: 9 (1)

Players:

Player 1: 52 (52 draw, 0 discard) + 1 in hand, 1 remaining, 0 in reserve

Player 2: 53 (51 draw, 2 discard)

Player 1, you are holding a 9S. Your move?

3

Heads:

2: 6 (1)

3: 9 (2)

Players:

Player 1: 52 (52 draw, 0 discard)

Player 2: 53 (51 draw, 2 discard)

Player 2, it is your turn.

Heads:

2: 6 (1)

3: 9 (2)

Players:

Player 1: 52 (52 draw, 0 discard)

Player 2: 52 (50 draw, 2 discard) + 1 in hand, 1 remaining, 0 in reserve

Player 2, you are holding a JD. Your move?

0   **// example of player placing the card in the reserve**

Heads:

2: 6 (1)

3: 9 (2)

Players:

Player 1: 52 (52 draw, 0 discard)

Player 2: 51 (49 draw, 2 discard) + 1 in hand, 0 remaining, 1 in reserve
          // now the reserve has 1 card and the draw pile has one less

Player 2, you are holding a AS. Your move?

3   **// universal ace can go anywhere**

Heads:

2: 6 (1)

3: A (3)

Players:

Player 1: 52 (52 draw, 0 discard)

Player 2: 51 (49 draw, 2 discard)   **// player 2's reserve returns to the draw**

Player 1, it is your turn.

Heads:

2: 6 (1)

3: A (3)

Players:

Player 1: 51 (51 draw, 0 discard) + 1 in hand, 1 remaining, 0 in reserve

Player 2: 52 (50 draw, 2 discard)

Player 1, you are holding a 7C. Your move?

3   **// anything can be placed on the Ace on Hydra #3**

Heads:

2: 6 (1)

3: 7 (4)

Players:

Player 1: 50 (50 draw, 0 discard) + 1 in hand, 0 remaining, 0 in reserve

```
Player 2: 52 (50 draw, 2 discard)


Player 1, you are holding a 4H. Your move?
3


Heads:
2: 6 (1)
3: 4 (5)


Players:
Player 1: 50 (50 draw, 0 discard)
Player 2: 52 (50 draw, 2 discard)


Player 2, it is your turn.



Heads:
2: 6 (1)
3: 4 (5)


Players:
Player 1: 50 (50 draw, 0 discard)
Player 2: 51 (49 draw, 2 discard) + 1 in hand, 1 remaining, 0 in reserve


Player 2, you are holding a JD. Your move?
0                    // place in reserve


Heads:
2: 6 (1)
3: 4 (5)
```

Players:

Player 1: 50 (50 draw, 0 discard)

Player 2: 50 (48 draw, 2 discard) + 1 in hand, 0 remaining, 1 in reserve

Player 2, you are holding a 6H. Your move?

6   **example of wrong input: not a valid head**

Player 2, you are holding a 6H. Your move?

3   **// example of wrong input: cannot place the 6 on a 4**

Player 2, you are holding a 6H. Your move?

2

Heads:

2: 6 (2)

3: 4 (5)

Players:

Player 1: 50 (50 draw, 0 discard)

Player 2: 50 (48 draw, 2 discard)

Player 1, it is your turn.

Heads:

2: 6 (2)

3: 4 (5)

Players:

Player 1: 49 (49 draw, 0 discard) + 1 in hand, 1 remaining, 0 in reserve

Player 2: 51 (49 draw, 2 discard)

Player 1, you are holding a 2D. Your move?

3

Heads:

2: 6 (2)

3: 2 (6)

Players:

Player 1: 48 (48 draw, 0 discard) + 1 in hand, 0 remaining, 0 in reserve

Player 2: 51 (49 draw, 2 discard)

Player 1, you are holding a 2S. Your move?

3

Heads:

2: 6 (2)

3: 2 (7)

Players:

Player 1: 48 (48 draw, 0 discard)

Player 2: 51 (49 draw, 2 discard)

Player 2, it is your turn.

Heads:

2: 6 (2)

3: 2 (7)

Players:

Player 1: 48 (48 draw, 0 discard)

Player 2: 50 (48 draw, 2 discard) + 1 in hand, 1 remaining, 0 in reserve

Player 2, you are holding a JD. Your move?

0

Heads:

2: 6 (2)

3: 2 (7)

Players:

Player 1: 48 (48 draw, 0 discard)

Player 2: 49 (47 draw, 2 discard) + 1 in hand, 0 remaining, 1 in reserve

Player 2, you are holding a 6C. Your move?

2

Heads:

2: 6 (3)

3: 2 (7)

Players:

Player 1: 48 (48 draw, 0 discard)

Player 2: 49 (47 draw, 2 discard)

Player 1, it is your turn.

Heads:

```
2: 6 (3)

3: 2 (7)


Players:

Player 1: 47 (47 draw, 0 discard) + 1 in hand, 1 remaining, 0 in reserve

Player 2: 50 (48 draw, 2 discard)


Player 1, you are holding a 10H. Your move?

0


Heads:

2: 6 (3)

3: 2 (7)


Players:

Player 1: 46 (46 draw, 0 discard) + 1 in hand, 0 remaining, 1 in reserve

Player 2: 50 (48 draw, 2 discard)
            // below, the player 1 draws a Queen that cannot be played)

Player 1, you are holding a QC. Your move?

0          // player 1 switches with the reserve to get the 10H

Player 1, you are holding a 10H. Your move?

3          // but it still cannot be placed on any of the cards

Player 1, you are holding a 10H. Your move?

2          // so cutting the head is the only choice


Heads:

3: 2 (7)

4: Q (1)                    // card in the reserve

5: 2 (1)                    // card "under" the 10H is the 2
```

Players:

Player 1: 49 (45 draw, 4 discard)

Player 2: 50 (48 draw, 2 discard)

Player 2, it is your turn.

Heads:

3: 2 (7)

4: Q (1)

5: 2 (1)

Players:

Player 1: 49 (45 draw, 4 discard)

Player 2: 49 (47 draw, 2 discard) + 1 in hand, 2 remaining, 0 in reserve

Player 2, you are holding a JD. Your move?

4

Heads:

3: 2 (7)

4: J (2)

5: 2 (1)

Players:

Player 1: 49 (45 draw, 4 discard)

Player 2: 48 (46 draw, 2 discard) + 1 in hand, 1 remaining, 0 in reserve

Player 2, you are holding a QH. Your move?

0

Heads:

3: 2 (7)

4: J (2)

5: 2 (1)

Players:

Player 1: 49 (45 draw, 4 discard)

Player 2: 47 (45 draw, 2 discard) + 1 in hand, 0 remaining, 1 in reserve

Player 2, you are holding a 7S. Your move?

4

Heads:

3: 2 (7)

4: 7 (3)

5: 2 (1)

Players:

Player 1: 49 (45 draw, 4 discard)

Player 2: 47 (45 draw, 2 discard)

Player 1, it is your turn.

Heads:

3: 2 (7)

4: 7 (3)

5: 2 (1)

Players:

Player 1: 48 (44 draw, 4 discard) + 1 in hand, 2 remaining, 0 in reserve

Player 2: 48 (46 draw, 2 discard)

Player 1, you are holding a 8D. Your move?

0

Heads:

3: 2 (7)

4: 7 (3)

5: 2 (1)

Players:

Player 1: 47 (43 draw, 4 discard) + 1 in hand, 1 remaining, 1 in reserve

Player 2: 48 (46 draw, 2 discard)

Player 1, you are holding a 6D. Your move?

4

Heads:

3: 2 (7)

4: 6 (4)

5: 2 (1)

Players:

Player 1: 46 (42 draw, 4 discard) + 1 in hand, 0 remaining, 1 in reserve

Player 2: 48 (46 draw, 2 discard)

Player 1, you are holding a 2H. Your move?

4

Heads:

3: 2 (7)

4: 2 (5)

5: 2 (1)

Players:

Player 1: 46 (42 draw, 4 discard)

Player 2: 48 (46 draw, 2 discard)

Player 2, it is your turn.

Heads:

3: 2 (7)

4: 2 (5)

5: 2 (1)

Players:

Player 1: 47 (43 draw, 4 discard)

Player 2: 47 (45 draw, 2 discard) + 1 in hand, 2 remaining, 0 in reserve

Player 2, you are holding a QH. Your move?

0

Heads:

3: 2 (7)

4: 2 (5)

5: 2 (1)

Players:

Player 1: 47 (43 draw, 4 discard)

Player 2: 46 (44 draw, 2 discard) + 1 in hand, 1 remaining, 1 in reserve

Player 2, you are holding a JH. Your move?

0

Player 2, you are holding a QH. Your move?

3   **// no choice but to cut the head**

Heads:

4: 2 (5)

5: 2 (1)

6: J (1)

7: 9 (1)

Players:

Player 1: 47 (43 draw, 4 discard)

Player 2: 53 (43 draw, 10 discard)

Player 1, it is your turn.

Heads:

4: 2 (5)

5: 2 (1)

6: J (1)

7: 9 (1)

Players:

Player 1: 46 (42 draw, 4 discard) + 1 in hand, 3 remaining, 0 in reserve

Player 2: 53 (43 draw, 10 discard)

Player 1, you are holding a 8D. Your move?
6

Heads:
4: 2 (5)
5: 2 (1)
6: 8 (2)
7: 9 (1)

Players:
Player 1: 45 (41 draw, 4 discard) + 1 in hand, 2 remaining, 0 in reserve
Player 2: 53 (43 draw, 10 discard)

Player 1, you are holding a 7S. Your move?
6

Heads:
4: 2 (5)
5: 2 (1)
6: 7 (3)
7: 9 (1)

Players:
Player 1: 44 (40 draw, 4 discard) + 1 in hand, 1 remaining, 0 in reserve
Player 2: 53 (43 draw, 10 discard)

Player 1, you are holding a JD. Your move?
0

Heads:

4: 2 (5)

5: 2 (1)

6: 7 (3)

7: 9 (1)

Players:

Player 1: 43 (39 draw, 4 discard) + 1 in hand, 0 remaining, 1 in reserve

Player 2: 53 (43 draw, 10 discard)

Player 1, you are holding a 8C. Your move?

7

Heads:

4: 2 (5)

5: 2 (1)

6: 7 (3)

7: 8 (2)

Players:

Player 1: 43 (39 draw, 4 discard)

Player 2: 53 (43 draw, 10 discard)

Player 2, it is your turn.

Heads:

4: 2 (5)

5: 2 (1)

6: 7 (3)

7: 8 (2)

Players:

Player 1: 44 (40 draw, 4 discard)

Player 2: 52 (42 draw, 10 discard) + 1 in hand, 3 remaining, 0 in reserve

Player 2, you are holding a 3D. Your move?

6

Heads:

4: 2 (5)

5: 2 (1)

6: 3 (4)

7: 8 (2)

Players:

Player 1: 44 (40 draw, 4 discard)

Player 2: 51 (41 draw, 10 discard) + 1 in hand, 2 remaining, 0 in reserve

Player 2, you are holding a 3D. Your move?

6

        // putting a 3 on a 3 instantly ends the turn

Heads:

4: 2 (5)

5: 2 (1)

6: 3 (5)

7: 8 (2)

Players:

```
Player 1: 44 (40 draw, 4 discard)

Player 2: 51 (41 draw, 10 discard)


Player 1, it is your turn.
```
// skip some output ...
```
Heads:

6: 3 (5)

7: 5 (4)

8: 3 (3)

9: 4 (4)

10: 7 (2)

11: 2 (1)


Players:

Player 1: 45 (31 draw, 14 discard)

Player 2: 43 (33 draw, 10 discard) + 1 in hand, 3 remaining, 0 in reserve


Player 2, you are holding a KH. Your move?

0
```
            // here player 2 adds 0 to the reserve
```
Heads:

6: 3 (5)

7: 5 (4)

8: 3 (3)

9: 4 (4)

10: 7 (2)

11: 2 (1)


Players:

Player 1: 45 (31 draw, 14 discard)
```

Player 2: 42 (32 draw, 10 discard) + 1 in hand, 2 remaining, 1 in reserve

Player 2, you are holding a 5H. Your move?
7   // then is able to match the 7 on hydra # 2 to instantly end the turn

Heads:

6: 3 (5)

7: 5 (5)

8: 3 (3)

9: 4 (4)

10: 7 (2)

11: 2 (1)

Players:

Player 1: 45 (31 draw, 14 discard)

Player 2: 42 (32 draw, 10 discard)

Player 1, it is your turn.

// skipping some output ...

Heads:

8: 3 (4)

9: 4 (4)

10: 7 (2)

11: 2 (3)

12: 5 (2)

13: 7 (7)

14: 2 (3)

15: 10 (2)

Players:

Player 1: 42 (13 draw, 29 discard) + 1 in hand, 1 remaining, 1 in reserve

Player 2: 37 (27 draw, 10 discard)

Player 1, you are holding a Joker. Your move?

11   **// player 1 tries to put a joker on a 2**

Joker value? **// but declares it a 3, so the prompt asks for the move again**

3

Player 1, you are holding a Joker. Your move?

11

Joker value?

A   **// this time, the Ace is smaller than the 2**

Heads:

8: 3 (4)

9: 4 (4)

10: 7 (2)

11: A (4)

12: 5 (2)

13: 7 (7)

14: 2 (3)

15: 10 (2)

Players:

Player 1: 41 (12 draw, 29 discard) + 1 in hand, 0 remaining, 1 in reserve

Player 2: 37 (27 draw, 10 discard)

Player 1, you are holding a 4C. Your move?

11

Heads:

8: 3 (4)

9: 4 (4)

10: 7 (2)

11: 4 (5)

12: 5 (2)

13: 7 (7)

14: 2 (3)

15: 10 (2)

Players:

Player 1: 41 (12 draw, 29 discard)

Player 2: 37 (27 draw, 10 discard)

Player 2, it is your turn.

// the game ends:

Heads:

10: Q (9)

11: 2 (13)

12: 2 (10)

13: 7 (13)

14: 8 (10)

15: A (9)

16: A (13)

17: A (10)

18: 4 (8)

19: A (3)

Players:

Player 1: 8 (4 draw, 4 discard)

Player 2: 1 (0 draw, 1 discard) + 1 in hand, 7 remaining, 0 in reserve

Player 2, you are holding a 5C. Your move?

13

Heads:

10: Q (9)

11: 2 (13)

12: 2 (10)

13: 5 (14)

14: 8 (10)

15: A (9)

16: A (13)

17: A (10)

18: 4 (8)

19: A (3)

Players:

Player 1: 8 (4 draw, 4 discard)

Player 2: 0 (0 draw, 0 discard) + 1 in hand, 6 remaining, 0 in reserve

Player 2, you are holding a 2D. Your move?

12

Player 2 wins!

f93li@ubuntu2004-008:~/cs246/s21/final/project$

Here is an example of testing mode

This code was copy and pasted directly from the terminal:

----

f93li@ubuntu2004-008:~/cs246/s21/final/project$ ./hydra -testing

-testing

How many players? **// for the first turn, the terminal is prompting the**

3   **// user to enter the value and suit for the first card**

Card value?

A

Suit?

S

Heads:

1: A (1)

Players:

Player 1: 53 (53 draw, 0 discard)

Player 2: 54 (54 draw, 0 discard)

Player 3: 54 (54 draw, 0 discard)

Player 2, it is your turn.

Heads:

1: A (1)

Players:

Player 1: 53 (53 draw, 0 discard)

Player 2: 53 (53 draw, 0 discard) + 1 in hand, 0 remaining, 0 in reserve

Player 3: 54 (54 draw, 0 discard)

Card value?   **// asking for the card value each time**

K

Suit?

D

Player 2, you are holding a KD. Your move?

1

Heads:

1: K (2)

Players:

Player 1: 53 (53 draw, 0 discard)

Player 2: 53 (53 draw, 0 discard)

Player 3: 54 (54 draw, 0 discard)

Player 3, it is your turn.

Heads:

1: K (2)

Players:

Player 1: 53 (53 draw, 0 discard)

Player 2: 53 (53 draw, 0 discard)

Player 3: 53 (53 draw, 0 discard) + 1 in hand, 0 remaining, 0 in reserve

Card value?

2

Suit?

J

Player 3, you are holding a 2J. Your move?

1

Joker value?

10

Heads:

1: 10 (3)

Players:

Player 1: 53 (53 draw, 0 discard)

Player 2: 53 (53 draw, 0 discard)

Player 3: 53 (53 draw, 0 discard)

Player 1, it is your turn.

Heads:

1: 10 (3)

Players:

Player 1: 52 (52 draw, 0 discard) + 1 in hand, 0 remaining, 0 in reserve

Player 2: 53 (53 draw, 0 discard)

Player 3: 53 (53 draw, 0 discard)

Card value?

3

Suit?

C

Player 1, you are holding a 3C. Your move?

0   **// when placing the card into the reserve, you are asked for the card**

Card value?

A

Suit?

H

Player 1, you are holding a AH. Your move?

// ... skipping some output

Heads:

2: 6 (1)

3: Q (1)

Players:

Player 1: 51 (51 draw, 0 discard) + 1 in hand, 1 remaining, 0 in reserve

Player 2: 52 (52 draw, 0 discard)

Player 3: 56 (50 draw, 6 discard)

// below, there is a joker, so the player is asked for the initial value only

Card value?

K

Player 1, you are holding a Joker. Your move? **// normal joker prompt**

3   **// prompts again**

Card value?

10

Suit?

J

Player 1, you are holding a Joker. Your move?

3

Joker value?

10   **// when it comes to actually placing the card, the normal prompt**
            for the joker placing onto a pile will appear

Heads:

2: 6 (1)

3: 10 (2)

Players:

Player 1: 50 (50 draw, 0 discard) + 1 in hand, 0 remaining, 0 in reserve

Player 2: 52 (52 draw, 0 discard)

Player 3: 56 (50 draw, 6 discard)

Card value?

// ...

This concludes the demo. Thank you.