Texas Hold'em poker game

Texas Hold'em poker is a game module for people who want to play with bot players.

Usage

This is a package of play Texas Hols'em poker game and use test case to get right rank.

GUI

Open the PA3_Shunwen_Luo.py. Use command to test for User mode.

```
python PA3_Shunwen_Luo.py -u -p {number of players}
```

> Note: `{number of players}` needs to be specified by user and it should be an int.

Then it will ask for fold or bet. Enter 1 will choose fold and enter 2 will choose bet.

```
1
```

If user chooses 1, all will proceed on their own until the end of a game.

```
2
```

If user chooses 2, user needs to enter a number of money to bet.

```
{number of money}
```

> Note: `{number of money}` needs to be specified by user and it should be an int.

This question of whether to fold or bet will last three times. After three times, the game will end and the player will be asked to continue or exit. Enter 1 will choose continue and enter 2 will choose exit.

```
1
```

If user chooses 1, the game will restart, but the player's money will remain as it was at the end of the previous game. Players with less than or equal to 0 money will be eliminated.

```
2
```

If user chooses 2, the game ends.

Smart bot

Smart bot is controlled by three methods of player class and it will be used to determine how much money they will bet.

First bet

In the first bet, the method will be used is smartBet1. If two cards which are distributed to bot has same number, continue number or same suit, they will bet 2

dollars. The others are bet 1 dollar.

Second bet

In the second bet, the method will be used is smartBet2. The first person's bet will be determined by its rank. If its rank is in range of 0 to 2, it will bet 3 dollars; If its rank is in range of 3 to 5, it will bet 2 dollars; If its rank is in range of 6 to 9, it will bet 1 dollar. After that, the others' bet will determined by the max bet in the cartable. If the max bet is 3 dollars and its rank is lower than 2, they will bet 1 dollar. If the max bet is 2 dollars and its rank is lower than 5, they will bet 1 dollar, too.

Third bet

In the third bet, the method will be used is smartBet3. If the bot's rank is 9, it will fold immediately. After that, it will calculate the probability of other bots' winning. If the probobility is more than 50%, it will only bet 1 dollar. If the probobility is less than 50% it will follow the second bet's rule to bet.