

```
In [ ]: """
EXAMPLE
Techniques Used
- Range
- Series
- Lambda
- np.random.permutation
- List slicing
- .sample
- GroupBy
"""
```

```
In [58]: import pandas as pd
import numpy as np
```

```
In [59]: suits = ['H', 'S', 'C', 'D']
card_val = (range(1, 11) + [10] * 3) * 4
base_names = ['A'] + range(2, 11) + ['J', 'Q', 'K']
cards = []
for suit in suits:
    cards.extend(str(num) + suit for num in base_names)

deck = pd.Series(card_val, index=cards)
```

```
In [60]: def draw(deck, n=5):
    return deck.take(np.random.permutation(len(deck))[:n])

# Last letter is the suit
get_suit = lambda card: card[-1]
```

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In [61]: # Get random suited poker hands for each suit
deck.groupby(get_suit).apply(draw, n=2)
```

```
Out[61]: C  AC      1
          2C      2
D  AD      1
    6D      6
H  JH     10
    7H      7
S  JS     10
    AS      1
dtype: int64
```

```
In [62]: # Deal hands to 6 players
def deal(num_players=6):
    # 2 cards for each player and 5 for the board
    hand = deck.sample(num_players * 2 + 5)

    # Slice selected cards
    player_cards = hand[:num_players * 2]
    board = hand[num_players * 2:]
    flop = board[:3]
    turn = board[3:4]
    river = board[4:]

    deal = {}
    for i, hole_cards in enumerate(np.split(player_cards, num_players)):
        key = 'player{}'.format(i)
        deal[key] = hole_cards

    deal['flop'] = flop
    deal['turn'] = turn
    deal['river'] = river
    return deal
```

```
In [64]: deal()
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```
Out[64]: {'flop': 7C      7
          3C      3
          2D      2
          dtype: int64, 'player0': 4S      4
          KS      10
          dtype: int64, 'player1': QC      10
          9C      9
          dtype: int64, 'player2': 4D      4
          JC      10
          dtype: int64, 'player3': 7D      7
          AD      1
          dtype: int64, 'player4': JH      10
          5H      5
          dtype: int64, 'player5': 10S     10
          JS      10
          dtype: int64, 'river': 8D      8
          dtype: int64, 'turn': 10C     10
          dtype: int64}
```

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In [ ]:
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