- 指標陣列 (array of pointer)

```
const char *suit[ 4 ] = { "Hearts", "Diamonds", "Clubs", "Spades" };
```
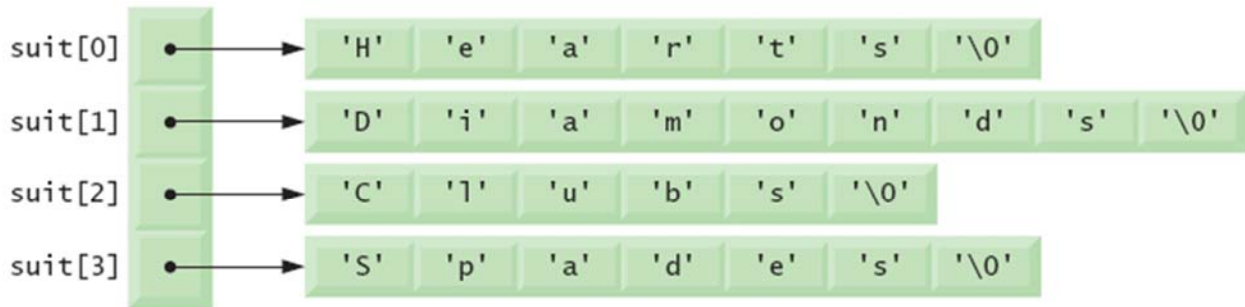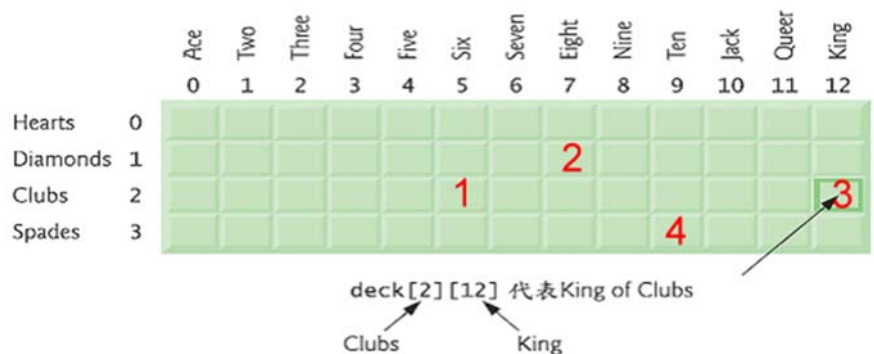


圖 7.22 suit 陣列的圖形表示

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- 模擬發牌程式-指標陣列 (array of pointer)
  1. 首先設定deck[4][13]初始直都是0，尚未設定順序
     - int deck[4][13] ={0};
  2. 設定deck[4][13]出牌順序
     - shuffle(deck);
  3. 檢查deck[4][13]出牌順序，由1到52列印花色和大小
     - deal(deck);



deck[2][12] 代表King of Clubs

- 模擬發牌程式-指標陣列 (array of pointer)

```
1  #include <stdio.h>
2  #include <stdlib.h>
3  #include <time.h>
4
5  void shuffle(int wDeck[][13]);
6  void deal(const int wDeck[][13], const char *wFace[],
7            const char *wSuit[]);
8
9  int main(void)
10 {
11     const char *suit[4] = {"Hearts", "Diamonds", "Clubs", "Spades"};
12
13     const char *face[13] =
14         {"Ace", "Deuce", "Three", "Four",
15          "Five", "Six", "Seven", "Eight",
16          "Nine", "Ten", "Jack", "Queen", "King"};
17
18     int deck[4][13] = {0};
19
20     srand(time(0));
21
22     shuffle(deck);
23     deal(deck, face, suit);
24     system("pause");
25     return 0;
26 }
```
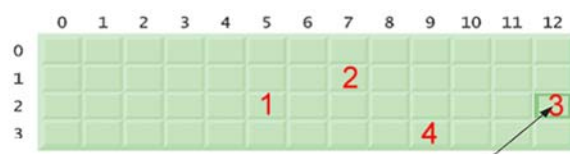
---

- 模擬發牌程式-設定deck[4][13]出牌順序
  - while (wDeck[row][column] != 0;) //代表尚未給定順序牌號
  - wDeck[row][column] = card; //給定順序牌號,由小到大
    - wDeck[row][column] = 1;
    - .........................
    - wDeck[row][column] = 52;



```
27
28  void shuffle(int wDeck[][13])
29  {
30      int row;
31      int column;
32      int card;
33
34      for (card=1;card<=52;card++)
35      {
36          do
37          {
38              row = rand() % 4;
39              column = rand() % 13;
40          } while(wDeck[row][column] != 0);
41
42          wDeck[row][column] = card;
43      }
44  }
```

- 模擬發牌程式-檢查deck[4][13]出牌順序，由1到52列印花色和大小

```
45
46  void deal(const int wDeck[][13], const char *wFace[],
47              const char *wSuit[])
48  {
49      int card;
50      int row;
51      int column;
52
53      for (card=1;card<=52;card++)
54      {
55          for (row=0;row<=3;row++)
56          {
57              for (column=0;column<=12;column++)
58              {
59                  if (wDeck[row][column] == card)
60                  {
61                      printf("%5s of %-8s%c",wFace[column],wSuit[row],
62                          card % 2 == 0 ? '\n' : '\t' );
63                  }
64              }
65          }
66      }
67  }
```

- 模擬發牌程式