Think Python 2e, Chapter 18 Notes

Inheritance

November 10, 2022

Card objects

Encoding of suits:

Spades	$\rightarrow$	3
Hearts	$\rightarrow$	2
Diamonds	$\rightarrow$	1
Clubs	$\rightarrow$	0

Encoding of ranks:

Ace	$\rightarrow$	1
...		
Jack	$\rightarrow$	11
Queen	$\rightarrow$	12
King	$\rightarrow$	13

Class definition of card:

```python
class Card:
    """Represents a standard playing card."""

    def __init__(self, suit=0, rank=2):
        self.suit = suit
        self.rank = rank
```

```python
queen_of_diamonds = Card(1, 12)
```

Class attributes

```python
# inside class Card:

suit_names = ['Clubs', 'Diamonds', 'Hearts', 'Spades']
rank_names = [None, 'Ace', '2', '3', '4',
              '5', '6', '7', '8', '9', '10',
              'Jack', 'Queen', 'King']

def __str__(self):
    return '%s of %s' % (Card.rank_names[self.rank],
                         Card.suit_names[self.suit])
```

- Variables declared inside a class but outside of any method, like `suit_names` and `rank_names` are **class variables**.
- They are associated with the class `Card`
- Variables like `suit` and `rank` are **instance variables**

Creating cards

```
>>> card1 = Card(1, 11)
>>> print(card1)
Jack of Diamonds
```