

The next Card

Below is a class called **Card**, representing a playing card. It consists of the string of **value**, (“A”, “2”, “3”, ... “10”, “J”, “Q”, “K”) and the string of **suit** (“club”, “diamond”, “heart”, “spade”).

The program below will accept multiple input cards and create a list **cards**, and then calling methods from the **Card** class. Your task is to complete methods in the **Card** class. (Only modify in the white areas. Do not change anything in the grey area.)

```
class Card:
    def __init__(self, value, suit):
        ???

    def __str__(self):
        ???

    def next1(self):
        ???

    def next2(self):
        ???

n = int(input())
cards = []
for i in range(n):
    value, suit = input().split()
    cards.append(Card(value, suit))
for i in range(n):
    print(cards[i].next1())
print("-----")
for i in range(n):
    print(cards[i])
print("-----")
for i in range(n):
    cards[i].next2()
    cards[i].next2()
    print(cards[i])
```

The detail of the **Card** class and its methods are as follow:

- The cards are ordered as follow:
 - The values are sorted in this order: 3 < 4 < 5 < ... < 10 < J < Q < K < A < 2
 - The suits are sorted in this order: club < diamond < heart < spade
 - If two cards have unequal value, the card with the higher value is greater.
 - If two cards have equal value, the card with the higher suit is greater.
- The next card is a card that has a value higher than the card of interest by 1. Unless the card is already has the highest value (2 spade), then the next card should have the lowest value (3 club):
 - The next card of (5 diamond) is (5 heart).
 - The next card of (10 spade) is (J club).
- The method **next1** will return a new object that is the next card
- The method **next2** will modify the value of the object to the next card without creating new object
- By calling the method **next2** two times, the card value will be turned into the next 2 cards.

Input

The first line is an integer **n**, representing the number of cards.

The next **n** lines are cards. Each line is a card value and a suit, separated by a space.

Output

There will be **3n+2** lines.

The first **n** lines will print the next cards, which are the results of the **next1** method, followed by 1 line of dashes.

The next **n** lines are the cards in the list **cards**, followed by 1 line of dashes.

The last **n** lines display each card after calling the method **next2** two times.

Input (from keyboard)	Output (on screen)
5 A spade K heart K club 7 diamond 2 spade	(2 club) (K spade) (K diamond) (7 heart) (3 club) ----- (A spade) (K heart) (K club) (7 diamond) (2 spade) ----- (2 diamond) (A club) (K heart) (7 spade) (3 diamond)