Week 10 Exercise

Exercise 10.1: Card Guessing Game

Instruction:

- Design your game using object-oriented concepts.

Develop a card guessing game with the following features.

First, your program randomly deals one card from the deck. Note that there are 52 cards in the deck. Each deck consists of 4 suits (Spades, Hearts, Diamonds, and Clubs), and each suit has 13 ranks (two, three, four, five, six, seven, eight, nine, ten, Jack, Queen, King and Ace). After your program picks a card, it asks the user to choose the rank as follows.

```
=====================================================================
                        CARD GUESSING v1.0
=====================================================================

:: Game 1 ::

Please select the rank of the card.
(1=Ace, 2=Two,…, 10=Ten, 11=Jack, 12=Queen, 13=King):
```

After the user has chosen the rank of the card, the program asks the user to choose the suit.

```
Please select the suit.
(1=Spades, 2=Hearts, 3=Diamonds, 4=Clubs):
```

Your program then determines if the user picks the correct card and responds with one of the following messages. If the user picks the wrong card, your program must provide hints for the user.

```
Wrong suit, wrong rank!! Pick again.

or

Wrong suit, correct rank!! Pick again.

or


Right suit, wrong rank!! Pick again.

or

You won!! You picked the right card.
Do you want to play again [Y/N]?
```

The user has 5 tries on each game. If all 5 attempts fail, the program reveals the card that it randomly picked and asks if the user wants to start a new game.

```
Right suit, wrong rank!! You've run out of tries.

You lost!! I chose Ace of Clubs.
Do you want to play again [Y/N]?
```

If the user wants to stop playing the game, your program displays the record and statistics of all games played in this session as shown below.

```
You lost!!! I chose Ace of Clubs.
Do you want to play again [Y/N]?N

          Card                    Result
          ----                    ------
      6 of Clubs                  You lost
   Ace of Spades                  You won
Jack of Diamonds                  You lost
     3 of Spades                  You lost

Total games played: 4

Win : 1 (25%)
Loss: 3 (75%)
```