

# Programming Exercise 12.3

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## The Game Of War, v.4.0

**Purpose.** Learn about objects.

In this exercise, a playing card is to be represented as an object, instead of using two separate variables to track suit and value.

**Requirements.** Rewrite your `War3.java` from Exercise 7.7 as `War4.java`. Modify the program to add an object specification named `PlayingCard`, with two whole number data members named `suit` and `value`. Rewrite the program so that it uses two `PlayingCard` objects, one for the human player and one for the computer player, instead of the 4 whole number variables used to track suits and values.

Further modify the program to simplify main by moving code blocks into functions. Write a void function to take a `PlayingCard` object as a parameter, and output its value and suit, like this: Jack of Clubs.

Write a value-returning function named `getYesOrNo`, to prompt the user for the "Continue? [Y/N]" input. It needs no parameters. It should include the validation loop, moved into it from main. It can return either an `int`, `char`, or `boolean` -- your choice.

**Program I/O.** Same as Exercise 7.7

**Example**, with user input in blue:

```
Computer's card is a 2 of Diamonds
Human's card is a 8 of Hearts
--<< Human wins! >>--
Computer wins: 0, Human wins: 1
Continue? [Y/N] y
```

```
Computer's card is a 2 of Spades
Human's card is a Ace of Hearts
--<< Human wins! >>--
Computer wins: 0, Human wins: 2
Continue? [Y/N] y
```

```
Computer's card is a Queen of Diamonds
Human's card is a 7 of Diamonds
--<< Computer wins! >>--
Computer wins: 1, Human wins: 2
Continue? [Y/N] Q
Continue? [Y/N] n
```