# Exercises: Working with Abstraction

This document defines the exercises for ["Java Advanced" course @ Software University](https://softuni.bg/modules/59/java-advanced). Please submit your solutions (source code) of all below described problems in [Judge](https://judge.softuni.bg/Contests/1576/Working-with-Abstraction-Exercise).

## Card Suit

Create an **enumeration type** that has as its constants the **four suits** of a deck of playing cards (CLUBS, DIAMONDS, HEARTS, SPADES). Iterate over the values of the enumeration type and print all **ordinal values** and **names**.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| Card Suits | Card Suits:  Ordinal value: 0; Name value: CLUBS  Ordinal value: 1; Name value: DIAMONDS  Ordinal value: 2; Name value: HEARTS  Ordinal value: 3; Name value: SPADES |

## Card Rank

Create an **enumeration type** that has as its constants the **fourteen ranks** of a deck of playing cards (ACE, TWO, THREE, FOUR, FIVE, SIX, SEVEN, EIGHT, NINE, TEN, JACK, QUEEN, KING). Iterate over the values of the enumeration type and print all ordinal values and names.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| Card Ranks | Card Ranks:  Ordinal value: 0; Name value: ACE  Ordinal value: 1; Name value: TWO  Ordinal value: 2; Name value: THREE  Ordinal value: 3; Name value: FOUR  Ordinal value: 4; Name value: FIVE  Ordinal value: 5; Name value: SIX  Ordinal value: 6; Name value: SEVEN  Ordinal value: 7; Name value: EIGHT  Ordinal value: 8; Name value: NINE  Ordinal value: 9; Name value: TEN  Ordinal value: 10; Name value: JACK  Ordinal value: 11; Name value: QUEEN  Ordinal value: 12; Name value: KING |

## Cards with Power

Create a program that generates a **deck of cards (class Card)** which have a power. The power of a card is calculated by **adding** the power of its rank plus the power of its suit.

**Rank powers** are as follows: (ACE - 14, TWO - 2, THREE - 3, FOUR - 4, FIVE - 5, SIX - 6, SEVEN - 7, EIGHT - 8, NINE - 9, TEN - 10, JACK - 11, QUEEN - 12, KING - 13).

**Suit powers** are as follows: (CLUBS - 0, DIAMONDS - 13, HEARTS - 26, SPADES - 39).

You will get a command consisting of **two** lines. On the **first** line you will receive the Rank of the card and on the **second** line you will get the suit of the card.

Print the output in the **format** "**Card name: ACE of SPADES; Card power: 53**".

### Note

Try using the enumeration types you have created in the previous problems but extending them with constructors and methods. Try using the **Enum.valueOf().**

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| TWO  CLUBS | Card name: TWO of CLUBS; Card power: 2 |
| ACE  SPADES | Card name: ACE of SPADES; Card power: 53 |