

INFO1103: Introduction to Programming

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Enumeration : a special kind of class

An enumeration is a collection of predefined values that a variable will take.

We can make simple classes by using `enum`.

Suit.java:

```
1 public enum Suit
2 {
3     CLUBS ,
4     DIAMONDS ,
5     HEARTS ,
6     SPADES ;
7 }
```

It's defined in a similar way to a `class`.

This example sets up constant values that can be used later.

In Java these values can only be compared with equals. They are not numbers.

Enumeration : a special kind of class (cont.)

EnumDemo.java:

```
1 public class EnumDemo {
2     public static void main(String[] args) {
3         Suit s = Suit.CLUBS;
4         Suit t = Suit.HEARTS;
5         if (s == t) {
6             System.out.println("Hearts are the same as clubs!");
7         }
8         if ( s == Suit.CLUBS )
9             System.out.println("s is CLUBS");
10        if ( s == Suit.HEARTS )
11            System.out.println("s is HEARTS");
12        if ( s == Suit.SPADES )
13            System.out.println("s is SPADES");
14        if ( s == Suit.DIAMONDS )
15            System.out.println("s is DIAMONDS");
16    }
17 }
```

Enumeration : a special kind of class (cont.)

Define the 8 directions for a compass in `enum` `Direction.java`:

```
1 public enum Direction
2 {
3
4
5
6
7
8
9
10
11
12
13 }
```

Suppose you want to test if two directions are opposite, what would you do?
(hint `enum` is still a `class`)